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#### **KEY=YSIS - RILEY CASSIUS**

#### MATHEMATICAL STATISTICS AND DATA ANALYSIS

**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.

#### AN INTRODUCTION TO STATISTICS AND DATA ANALYSIS USING STATA®

#### FROM RESEARCH DESIGN TO FINAL REPORT

**SAGE Publications** An Introduction to Statistics and Data Analysis Using Stata® by Lisa Daniels and Nicholas Minot provides a step-by-step introduction for statistics, data analysis, or research methods classes with Stata. Concise descriptions emphasize the concepts

behind statistics for students rather than the derivations of the formulas. With real-world examples from a variety of disciplines and extensive detail on the commands in Stata, this text provides an integrated approach to research design, statistical analysis, and report writing for social science students.

## **STATISTICAL METHODS**

**Academic Press** Statistical Methods, Fourth Edition, is designed to introduce students to a wide-range of popular and practical statistical techniques. Requiring a minimum of advanced mathematics, it is suitable for undergraduates in statistics, or graduate students in the physical, life, and social sciences. By providing an overview of statistical reasoning, this text equips readers with the insight needed to summarize data, recognize good experimental designs, implement appropriate analyses, and arrive at sound interpretations of statistical results. Includes extensive case studies and exercises drawn from a variety of disciplines Provides practice problems for each chapter with complete solutions Offers new and updated data sets available online Includes recommended data analysis projects with accompanying data sets

#### **DESIGN AND ANALYSIS OF EXPERIMENTS**

#### **DISCOVERING KNOWLEDGE IN DATA**

#### AN INTRODUCTION TO DATA MINING

John Wiley & Sons Learn Data Mining by doing data mining Data mining can be revolutionary-but only when it's done right. The powerful black box data mining software now available can produce disastrously misleading results unless applied by a skilled and knowledgeable analyst. Discovering Knowledge in Data: An Introduction to Data Mining provides both the practical experience and the theoretical insight needed to reveal valuable information hidden in large data sets. Employing a "white box" methodology and with real-world case studies, this step-by-step guide walks readers through the various algorithms and statistical structures that underlie the software and presents examples of their operation on actual large data sets. Principal topics include: \* Data preprocessing and classification \* Exploratory analysis \* Decision trees \* Neural and Kohonen networks \* Hierarchical and k-means clustering \* Association rules \* Model evaluation techniques Complete with scores of screenshots and diagrams to encourage graphical learning, Discovering Knowledge in Data: An Introduction to Data Mining gives students in Business, Computer Science, and Statistics as well as professionals in the field the power to turn any data warehouse into actionable knowledge. An Instructor's Manual presenting detailed solutions to all the problems in the book is available online.

#### A FIRST COURSE IN DESIGN AND ANALYSIS OF EXPERIMENTS

**W. H. Freeman** Oehlert's text is suitable for either a service course for non-statistics graduate students or for statistics majors. Unlike most texts for the one-term grad/upper level course on experimental design, Oehlert's new book offers a superb balance of both analysis and design, presenting three practical themes to students: • when to use various designs • how to analyze the results • how to recognize various design options Also, unlike other older texts, the book is fully oriented toward the use of statistical software in analyzing experiments.

#### **APPLIED LINEAR REGRESSION**

John Wiley & Sons

#### MONTHLY CATALOG OF UNITED STATES GOVERNMENT PUBLICATIONS

## FLEXIBLE IMPUTATION OF MISSING DATA, SECOND EDITION

CRC Press Missing data pose challenges to real-life data analysis. Simple ad-hoc fixes, like deletion or mean imputation, only work under highly restrictive conditions, which are often not met in practice. Multiple imputation replaces each missing value by multiple plausible values. The variability between these replacements reflects our ignorance of the true (but missing) value. Each of the completed data set is then analyzed by standard methods, and the results are pooled to obtain unbiased estimates with correct confidence intervals. Multiple imputation is a general approach that also inspires novel solutions to old problems by reformulating the task at hand as a missing-data problem. This is the second edition of a popular book on multiple imputation, focused on explaining the application of methods through detailed worked examples using the MICE package as developed by the author. This new edition incorporates the recent developments in this fast-moving field. This class-tested book avoids mathematical and technical details as much as possible: formulas are accompanied by verbal statements that explain the formula in accessible terms. The book sharpens the reader's intuition on how to think about missing data, and provides all the tools needed to execute a well-grounded quantitative analysis in the presence of missing data.

#### HANDBOOK OF DATA VISUALIZATION

**Springer Science & Business Media** Visualizing the data is an essential part of any data analysis. Modern computing developments have led to big improvements in graphic capabilities and there are many new possibilities for data displays. This book gives an

overview of modern data visualization methods, both in theory and practice. It details modern graphical tools such as mosaic plots, parallel coordinate plots, and linked views. Coverage also examines graphical methodology for particular areas of statistics, for example Bayesian analysis, genomic data and cluster analysis, as well software for graphics.

#### **MODELING FINANCIAL TIME SERIES WITH S-PLUS**

**Springer Science & Business Media** The field of financial econometrics has exploded over the last decade This book represents an integration of theory, methods, and examples using the S-PLUS statistical modeling language and the S+FinMetrics module to facilitate the practice of financial econometrics. This is the first book to show the power of S-PLUS for the analysis of time series data. It is written for researchers and practitioners in the finance industry, academic researchers in economics and finance, and advanced MBA and graduate students in economics and finance. Readers are assumed to have a basic knowledge of S-PLUS and a solid grounding in basic statistics and time series concepts. This Second Edition is updated to cover S+FinMetrics 2.0 and includes new chapters on copulas, nonlinear regime switching models, continuous-time financial models, generalized method of moments, seminonparametric conditional density models, and the efficient method of moments. Eric Zivot is an associate professor and Gary Waterman Distinguished Scholar in the Economics Department, and adjunct associate professor of finance in the Business School at the University of Washington. He regularly teaches courses on econometric theory, financial econometrics and time series econometrics, and is the recipient of the Henry T. Buechel Award for Outstanding Teaching. He is an associate editor of Studies in Nonlinear Dynamics and Econometrics. He has published papers in the leading econometrics journals, including Econometrica, Econometric Theory, the Journal of Business and Economic Statistics, Journal of Econometrics, and the Review of Economics and Statistics. Jiahui Wang is an employee of Ronin Capital LLC. He received a Ph.D. in Economics from the University of Washington in 1997. He has published in leading econometrics journals such as Econometrica and Journal of Business and Economic Statistics, and is the Principal Investigator of National Science Foundation SBIR grants. In 2002 Dr. Wang was selected as one of the "2000 Outstanding" Scholars of the 21st Century" by International Biographical Centre.

#### HANDBOOK OF HUMAN IMMUNOLOGY, SECOND EDITION

**CRC Press** Since the publication of the first edition of the Handbook of Human Immunology in 1997, major scientific achievements have directly contributed to an increased understanding of the complexities of the human immune system in health and disease. Whether as a result of the sequencing of the entire human genome, or of technological advancements, several new components of the immune system have been revealed, along with new technologies for their measurement and evaluation. Major breakthroughs in

the field include an increase in the number of recognized "clusters of differentiation" on the surface of leukocytes and associated cells, the establishment of a chemokine and chemokine receptor nomenclature system, the discovery of more than 30 lymphokines, and humanized monoclonal antibody therapy as a staple of pharmacologic armamentarium Modeling the previous edition, the text begins with an overview of the immune system, focusing on the role of cell receptors, accessory molecules, and cytokines in immune responses and immunological disorders. It then presents a practical, easy-to-read chapter on "statistics in immunological testing"—an invaluable asset for interpreting test results, validating new tests, and developing reference ranges. Simultaneously, the text emphasizes clinically relevant immunological parameters and clarifies the basic principles underlying immune system assays, and applications and interpretations of immune tests. A complete guide to molecular and cellular immunology for practicing clinicians, clinical laboratory professionals, and students, this resource combines basic explanations of laboratory tests with more than 100 tables full of references, and up-to-date information on new developments in immunogenetics.

#### **REGRESSION**

#### **LINEAR MODELS IN STATISTICS**

Springer Science & Business Media Regression is the branch of Statistics in which a dependent variable of interest is modelled as a linear combination of one or more predictor variables, together with a random error. The subject is inherently two- or higher-dimensional, thus an understanding of Statistics in one dimension is essential. Regression: Linear Models in Statistics fills the gap between introductory statistical theory and more specialist sources of information. In doing so, it provides the reader with a number of worked examples, and exercises with full solutions. The book begins with simple linear regression (one predictor variable), and analysis of variance (ANOVA), and then further explores the area through inclusion of topics such as multiple linear regression (several predictor variables) and analysis of covariance (ANCOVA). The book concludes with special topics such as non-parametric regression and mixed models, time series, spatial processes and design of experiments. Aimed at 2nd and 3rd year undergraduates studying Statistics, Regression: Linear Models in Statistics requires a basic knowledge of (one-dimensional) Statistics, as well as Probability and standard Linear Algebra. Possible companions include John Haigh's Probability Models, and T. S. Blyth & E.F. Robertsons' Basic Linear Algebra and Further Linear Algebra.

#### **INTRODUCTION TO BUSINESS STATISTICS**

**South Western Educational Publishing** Highly praised for its clarity and great examples, Weiers' INTRODUCTION TO BUSINESS STATISTICS, 6E introduces fundamental statistical concepts in a conversational language that connects with today's students. Even

those intimidated by statistics quickly discover success with the book's proven learning aids, outstanding illustrations, non-technical terminology, and hundreds of current examples drawn from real-life experiences familiar to students. A continuing case and contemporary applications combine with more than 100 new or revised exercises and problems that reflect the latest changes in business today with an accuracy you can trust. You can easily introduce today's leading statistical software and teach not only how to complete calculations by hand and using Excel, but also how to determine which method is best for a particular task. The book's student-oriented approach is supported with a wealth of resources, including the innovative new CengageNOW online course management and learning system that saves you time while helping students master the statistical skills most important for business success.

#### THE ALGORITHM DESIGN MANUAL

**Springer Science & Business Media** This newly expanded and updated second edition of the best-selling classic continues to take the "mystery" out of designing algorithms, and analyzing their efficacy and efficiency. Expanding on the first edition, the book now serves as the primary textbook of choice for algorithm design courses while maintaining its status as the premier practical reference guide to algorithms for programmers, researchers, and students. The reader-friendly Algorithm Design Manual provides straightforward access to combinatorial algorithms technology, stressing design over analysis. The first part, Techniques, provides accessible instruction on methods for designing and analyzing computer algorithms. The second part, Resources, is intended for browsing and reference, and comprises the catalog of algorithmic resources, implementations and an extensive bibliography. NEW to the second edition: • Doubles the tutorial material and exercises over the first edition • Provides full online support for lecturers, and a completely updated and improved website component with lecture slides, audio and video • Contains a unique catalog identifying the 75 algorithmic problems that arise most often in practice, leading the reader down the right path to solve them • Includes several NEW "war stories" relating experiences from real-world applications • Provides up-to-date links leading to the very best algorithm implementations available in C, C++, and Java

## HANDBOOK OF STATISTICAL GENETICS

**John Wiley & Sons** The Handbook for Statistical Genetics is widely regarded as the reference work in the field. However, the field has developed considerably over the past three years. In particular the modeling of genetic networks has advanced considerably via the evolution of microarray analysis. As a consequence the 3rd edition of the handbook contains a much expanded section on Network Modeling, including 5 new chapters covering metabolic networks, graphical modeling and inference and simulation of pedigrees and

genealogies. Other chapters new to the 3rd edition include Human Population Genetics, Genome-wide Association Studies, Family-based Association Studies, Pharmacogenetics, Epigenetics, Ethic and Insurance. As with the second Edition, the Handbook includes a glossary of terms, acronyms and abbreviations, and features extensive cross-referencing between the chapters, tying the different areas together. With heavy use of up-to-date examples, real-life case studies and references to web-based resources, this continues to be must-have reference in a vital area of research. Edited by the leading international authorities in the field. David Balding - Department of Epidemiology & Public Health, Imperial College An advisor for our Probability & Statistics series, Professor Balding is also a previous Wiley author, having written Weight-of-Evidence for Forensic DNA Profiles, as well as having edited the two previous editions of HSG. With over 20 years teaching experience, he's also had dozens of articles published in numerous international journals. Martin Bishop – Head of the Bioinformatics Division at the HGMP Resource Centre As well as the first two editions of HSG, Dr Bishop has edited a number of introductory books on the application of informatics to molecular biology and genetics. He is the Associate Editor of the journal Bioinformatics and Managing Editor of Briefings in Bioinformatics. Chris Cannings – Division of Genomic Medicine, University of Sheffield With over 40 years teaching in the area, Professor Cannings has published over 100 papers and is on the editorial board of many related journals. Co-editor of the two previous editions of HSG, he also authored a book on this topic.

#### **COMPARING GROUPS**

### RANDOMIZATION AND BOOTSTRAP METHODS USING R

**John Wiley & Sons** A hands-on guide to using R to carry out key statistical practices in educational and behavioral sciences research Computing has become an essential part of the day-to-day practice of statistical work, broadening the types of questions that can now be addressed by research scientists applying newly derived data analytic techniques. Comparing Groups: Randomization and Bootstrap Methods Using R emphasizes the direct link between scientific research questions and data analysis. Rather than relying on mathematical calculations, this book focus on conceptual explanations and the use of statistical computing in an effort to guide readers through the integration of design, statistical methodology, and computation to answer specific research questions regarding group differences. Utilizing the widely-used, freely accessible R software, the authors introduce a modern approach to promote methods that provide a more complete understanding of statistical concepts. Following an introduction to R, each chapter is driven by a research question, and empirical data analysis is used to provide answers to that question. These examples are data-driven inquiries that promote interaction between statistical methods and ideas and computer application. Computer code and output are interwoven in the book to illustrate exactly how each analysis is carried out and how output is interpreted. Additional topical coverage includes: Data exploration of one variable and multivariate data Comparing two groups and many groups Permutation tests, randomization

tests, and the independent samples t-Test Bootstrap tests and bootstrap intervals Interval estimates and effect sizes Throughout the book, the authors incorporate data from real-world research studies as well aschapter problems that provide a platform to perform data analyses. A related Web site features a complete collection of the book's datasets along with the accompanying codebooks and the R script files and commands, allowing readers to reproduce the presented output and plots. Comparing Groups: Randomization and Bootstrap Methods Using R is an excellent book for upper-undergraduate and graduate level courses on statistical methods, particularlyin the educational and behavioral sciences. The book also serves as a valuable resource for researchers who need a practical guide to modern data analytic and computational methods.

#### **DATA MINING WITH R**

## **LEARNING WITH CASE STUDIES, SECOND EDITION**

**CRC Press** Data Mining with R: Learning with Case Studies, Second Edition uses practical examples to illustrate the power of R and data mining. Providing an extensive update to the best-selling first edition, this new edition is divided into two parts. The first part will feature introductory material, including a new chapter that provides an introduction to data mining, to complement the already existing introduction to R. The second part includes case studies, and the new edition strongly revises the R code of the case studies making it more up-to-date with recent packages that have emerged in R. The book does not assume any prior knowledge about R. Readers who are new to R and data mining should be able to follow the case studies, and they are designed to be self-contained so the reader can start anywhere in the document. The book is accompanied by a set of freely available R source files that can be obtained at the book's web site. These files include all the code used in the case studies, and they facilitate the "do-it-yourself" approach followed in the book. Designed for users of data analysis tools, as well as researchers and developers, the book should be useful for anyone interested in entering the "world" of R and data mining. About the Author Luís Torgo is an associate professor in the Department of Computer Science at the University of Porto in Portugal. He teaches Data Mining in R in the NYU Stern School of Business' MS in Business Analytics program. An active researcher in machine learning and data mining for more than 20 years, Dr. Torgo is also a researcher in the Laboratory of Artificial Intelligence and Data Analysis (LIAAD) of INESC Porto LA.

## THE CODING MANUAL FOR QUALITATIVE RESEARCHERS

**SAGE** The Second Edition of Johnny Saldaña's international bestseller provides an in-depth guide to the multiple approaches available for coding qualitative data. Fully up to date, it includes new chapters, more coding techniques and an additional glossary. Clear, practical and authoritative, the book: -describes how coding initiates qualitative data analysis -demonstrates the writing of analytic

memos -discusses available analytic software -suggests how best to use The Coding Manual for Qualitative Researchers for particular studies. In total, 32 coding methods are profiled that can be applied to a range of research genres from grounded theory to phenomenology to narrative inquiry. For each approach, Saldaña discusses the method's origins, a description of the method, practical applications, and a clearly illustrated example with analytic follow-up. A unique and invaluable reference for students, teachers, and practitioners of qualitative inquiry, this book is essential reading across the social sciences.

#### **EDUCATIONAL RESEARCH**

## PLANNING, CONDUCTING, AND EVALUATING QUANTITATIVE AND QUALITATIVE RESEARCH

**Pearson College Division** This title is only available as a loose-leaf version with Pearson eText, or an electronic book. A practical, step-by-step core research text that balances coverage of qualitative and quantitative methods Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research offers a truly balanced, inclusive, and integrated overview of the field as it currently stands. This text provides thorough coverage of the methods and procedures used in quantitative, qualitative, and mixed-methods research. It helps students learn how to begin to conduct research and see a project through preparation of a manuscript, and it also helps students learn how to read and evaluate research reports. Video-Enhanced Pearson eText. Included in this package is access to the new Video-Enhanced eText for exclusively from Pearson. The Video-Enhanced Pearson eText is: Engaging. Full-color online chapters include dynamic videos that show what course concepts look like in real classrooms, model good teaching practice, and expand upon chapter concepts. Video links, chosen by our authors and other subject-matter experts, are embedded right in context of the content you are reading Convenient. Enjoy instant online access from your computer or download the Pearson eText App to read on or offline on your iPad and Android tablets.\* Interactive. Features include embedded video, embedded assessment, note taking and sharing, highlighting and search. Affordable. Experience all these advantages of the Video-Enhanced eText along with all the benefits of print for 40% to 50% less than a print bound book. \*The Pearson eText App is available for free on Google Play and in the App Store.\* Requires Android OS 3.1 - 4, a 7" or 10" tablet or iPad iOS 5.0 or newer 0133831531 / 9780133831535 Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, Loose-Leaf Version with Video-Enhanced Pearson eText -- Access Card Package Package consists of: 0133549585 / 9780133549584 Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, Loose-Leaf Version 0133570088 / 9780133570083 Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, Video-Enhanced Pearson eText -- Access Card

#### STATISTICAL PATTERN RECOGNITION

John Wiley & Sons Statistical pattern recognition is a very active area of study and research, which has seen many advances in recent years. New and emerging applications - such as data mining, web searching, multimedia data retrieval, face recognition, and cursive handwriting recognition - require robust and efficient pattern recognition techniques. Statistical decision making and estimation are regarded as fundamental to the study of pattern recognition. Statistical Pattern Recognition, Second Edition has been fully updated with new methods, applications and references. It provides a comprehensive introduction to this vibrant area - with material drawn from engineering, statistics, computer science and the social sciences - and covers many application areas, such as database design, artificial neural networks, and decision support systems. \* Provides a self-contained introduction to statistical pattern recognition. \* Each technique described is illustrated by real examples. \* Covers Bayesian methods, neural networks, support vector machines, and unsupervised classification. \* Each section concludes with a description of the applications that have been addressed and with further developments of the theory. \* Includes background material on dissimilarity, parameter estimation, data, linear algebra and probability. \* Features a variety of exercises, from 'open-book' questions to more lengthy projects. The book is aimed primarily at senior undergraduate and graduate students studying statistical pattern recognition, pattern processing, neural networks, and data mining, in both statistics and engineering departments. It is also an excellent source of reference for technical professionals working in advanced information development environments.

#### TRANSPORTATION PLANNING HANDBOOK

**John Wiley & Sons** A multi-disciplinary approach to transportation planningfundamentals The Transportation Planning Handbook is a comprehensive, practice-oriented reference that presents the fundamental conceptsof transportation planning alongside proven techniques. This newfourth edition is more strongly focused on serving the needs of allusers, the role of safety in the planning process, andtransportation planning in the context of societal concerns, including the development of more sustainable transportationsolutions. The content structure has been redesigned with a newformat that promotes a more functionally driven multimodal approachto planning, design, and implementation, including guidance towardthe latest tools and technology. The material has been updated toreflect the latest changes to major transportation resources suchas the HCM, MUTCD, HSM, and more, including the most current ADAaccessibility regulations. Transportation planning has historically followed the rational planning model of defining objectives, identifying problems, generating and evaluating alternatives, and developing plans. Planners are increasingly expected to adopt a moremulti-disciplinary approach, especially in light of the rising importance of sustainability and environmental concerns. This bookpresents the fundamentals of transportation planning in amultidisciplinary context, giving readers a practical reference forday-to-

day answers. Serve the needs of all users Incorporate safety into the planning process Examine the latest transportation planning softwarepackages Get up to date on the latest standards, recommendations, and codes Developed by The Institute of Transportation Engineers, thisbook is the culmination of over seventy years of transportation planning solutions, fully updated to reflect the needs of achanging society. For a comprehensive guide with practical answers, The Transportation Planning Handbook is an essential reference.

#### **BIOINFORMATICS FOR GENETICISTS**

#### John Wiley & Sons

#### **RESEARCH METHODS IN HEALTH PROMOTION**

John Wiley & Sons The bestselling textbook to understanding health research, updated and expanded Research Methods in Health Promotion provides students and practitioners with essential knowledge and skills regarding the design, implementation, analysis, and interpretation of research in the field of health promotion. Now in its second edition, this bestselling textbook has been updated with more recent research methodologies and additional information on sampling, participatory and survey research, and qualitative data analysis. The entire research process is covered, with specific points relating to both qualitative and quantitative research. By breaking the daunting process of research into simple and well-defined steps, this user-friendly text encourages students to think about research as a sequential process and provides explanations that facilitate better understanding of each step in the research process. A separate set of chapters cover the more quantitative methodological areas including designs, measurement, sampling, and data analysis in depth, giving readers the understanding they need to apply in practice. This book also provides applied chapters that illustrate the practical aspects of the research process, along with other critical information including grant writing and scientific writing. Evaluate the ethics, design, analysis, and interpretation of research Identify and understand the key components of research studies Analyze and interpret the results of experimental and survey research designs Understand the process of publishing a research report and constructing a grant proposal Research Methods in Health Promotion is ideal for both undergrad and graduate methods courses in health promotion and public health.

## TRENDS AND APPLICATIONS IN INFORMATION SYSTEMS AND TECHNOLOGIES

## **VOLUME 2**

**Springer Nature** This book is composed of a selection of articles from The 2021 World Conference on Information Systems and

Technologies (WorldCIST'21), held online between 30 and 31 of March and 1 and 2 of April 2021 at Hangra de Heroismo, Terceira Island, Azores, Portugal. WorldCIST is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences and challenges of modern information systems and technologies research, together with their technological development and applications. 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; N) Technologies for Biomedical Applications.

#### **DESIGN AND ANALYSIS OF EXPERIMENTS WITH R**

**Chapman and Hall/CRC** Design and Analysis of Experiments with R presents a unified treatment of experimental designs and design concepts commonly used in practice. It connects the objectives of research to the type of experimental design required, describes the process of creating the design and collecting the data, shows how to perform the proper analysis of the data, and illustrates the interpretation of results. Drawing on his many years of working in the pharmaceutical, agricultural, industrial chemicals, and machinery industries, the author teaches students how to: Make an appropriate design choice based on the objectives of a research project Create a design and perform an experiment Interpret the results of computer data analysis The book emphasizes the connection among the experimental units, the way treatments are randomized to experimental units, and the proper error term for data analysis. R code is used to create and analyze all the example experiments. The code examples from the text are available for download on the author's website, enabling students to duplicate all the designs and data analysis. Intended for a one-semester or two-quarter course on experimental design, this text covers classical ideas in experimental design as well as the latest research topics. It gives students practical guidance on using R to analyze experimental data.

#### THE RICE ECONOMY OF ASIA

**Routledge** To millions of people in the world, rice is the center of existence, especially in Asia, where more than 90 percent of the world's rice is grown. This book is about the trends and changes that have occurred in the Asian rice economy since World War II, but particularly since the introduction of new varieties of rice and modern technology in the mid-1960s. Although there is now a vast amount of literature and statistical data on various aspects of the subject, no single comprehensive treatment has previously been

prepared. The Rice Economy of Asia not only provides such a treatment but also presents a clear picture of some of the critical issues dealing with productivity and equity --- as a glance at the table of contents will show. In addition to 18 chapters, there are an extensive bibliography, 150 tables, and 50 charts. The volume, as a whole, should be interesting and useful to decisionmakers at national and international levels, to professionals, and to students of development.

#### REPORT OF THE PRESIDENTIAL COMMISSION ON THE SPACE SHUTTLE CHALLENGER ACCIDENT

**DIANE Publishing** Reviews the circumstances surrounding the Challenger accident to establish the probable cause or causes of the accident. Develops recommendations for corrective or other action based upon the Commission1s findings and determinations. Color photos, charts and tables.

#### **ARCHITECTURAL RESEARCH METHODS**

**John Wiley & Sons** A practical guide to research for architects and designers—now updated and expanded! From searching for the best glass to prevent glare to determining how clients might react to the color choice for restaurant walls, research is a crucial tool that architects must master in order to effectively address the technical, aesthetic, and behavioral issues that arise in their work. This book's unique coverage of research methods is specifically targeted to help professional designers and researchers better conduct and understand research. Part I explores basic research issues and concepts, and includes chapters on relating theory to method and design to research. Part II gives a comprehensive treatment of specific strategies for investigating built forms. In all, the book covers seven types of research, including historical, qualitative, correlational, experimental, simulation, logical argumentation, and case studies and mixed methods. Features new to this edition include: Strategies for investigation, practical examples, and resources for additional information A look at current trends and innovations in research Coverage of design studio-based research that shows how strategies described in the book can be employed in real life A discussion of digital media and online research New and updated examples of research studies A new chapter on the relationship between design and research Architectural Research Methods is an essential reference for architecture students and researchers as well as architects, interior designers, landscape architects, and building product manufacturers.

## **MATLAB FOR NEUROSCIENTISTS**

#### AN INTRODUCTION TO SCIENTIFIC COMPUTING IN MATLAB

**Academic Press** MATLAB for Neuroscientists serves as the only complete study manual and teaching resource for MATLAB, the globally accepted standard for scientific computing, in the neurosciences and psychology. This unique introduction can be used to learn the entire empirical and experimental process (including stimulus generation, experimental control, data collection, data analysis, modeling, and more), and the 2nd Edition continues to ensure that a wide variety of computational problems can be addressed in a single programming environment. This updated edition features additional material on the creation of visual stimuli, advanced psychophysics, analysis of LFP data, choice probabilities, synchrony, and advanced spectral analysis. Users at a variety of levels—advanced undergraduates, beginning graduate students, and researchers looking to modernize their skills—will learn to design and implement their own analytical tools, and gain the fluency required to meet the computational needs of neuroscience practitioners. The first complete volume on MATLAB focusing on neuroscience and psychology applications Problem-based approach with many examples from neuroscience and cognitive psychology using real data Illustrated in full color throughout Careful tutorial approach, by authors who are award-winning educators with strong teaching experience

# **EXPERIMENTAL AND QUASI-EXPERIMENTAL DESIGNS FOR RESEARCH**

**Ravenio Books** We shall examine the validity of 16 experimental designs against 12 common threats to valid inference. By experiment we refer to that portion of research in which variables are manipulated and their effects upon other variables observed. It is well to distinguish the particular role of this chapter. It is not a chapter on experimental design in the Fisher (1925, 1935) tradition, in which an experimenter having complete mastery can schedule treatments and measurements for optimal statistical efficiency, with complexity of design emerging only from that goal of efficiency. Insofar as the designs discussed in the present chapter become complex, it is because of the intransigency of the environment: because, that is, of the experimenter's lack of complete control.

## **BIG DATA**

#### **PRINCIPLES AND PARADIGMS**

**Morgan Kaufmann** Big Data: Principles and Paradigms captures the state-of-the-art research on the architectural aspects, technologies, and applications of Big Data. The book identifies potential future directions and technologies that facilitate insight into numerous scientific, business, and consumer applications. To help realize Big Data's full potential, the book addresses numerous

challenges, offering the conceptual and technological solutions for tackling them. These challenges include life-cycle data management, large-scale storage, flexible processing infrastructure, data modeling, scalable machine learning, data analysis algorithms, sampling techniques, and privacy and ethical issues. Covers computational platforms supporting Big Data applications Addresses key principles underlying Big Data computing Examines key developments supporting next generation Big Data platforms Explores the challenges in Big Data computing and ways to overcome them Contains expert contributors from both academia and industry

## **APPLIED REGRESSION INCLUDING COMPUTING AND GRAPHICS**

John Wiley & Sons A step-by-step guide to computing and graphics in regression analysis In this unique book, leading statisticians Dennis Cook and Sanford Weisberg expertly blend regression fundamentals and cutting-edge graphical techniques. They combine and up- date most of the material from their widely used earlier work, An Introduction to Regression Graphics, and Weisberg's Applied Linear Regression; incorporate the latest in statistical graphics, computing, and regression models; and wind up with a modern, fully integrated approach to one of the most important tools of data analysis. In 23 concise, easy-to-digest chapters, the authors present:? A wealth of simple 2D and 3D graphical techniques, helping visualize results through graphs \* An improved version of the user-friendly Arc software, which lets readers promptly implement new ideas \* Complete coverage of regression models, including logistic regression and generalized linear models \* More than 300 figures, easily reproducible on the computer \* Numerous examples and problems based on real data \* A companion Web site featuring free software and advice, available at www.wiley.com/mathem atics Accessible, self-contained, and fully referenced, Applied Regression Including Computing and Graphics assumes only a first course in basic statistical methods and provides a bona fide user manual for the Arc software. It is an invaluable resource for anyone interested in learning how to analyze regression problems with confidence and depth.

#### **METAHEURISTICS**

#### FROM DESIGN TO IMPLEMENTATION

**John Wiley & Sons** A unified view of metaheuristics This book provides a complete background on metaheuristics and shows readers how to design and implement efficient algorithms to solve complex optimization problems across a diverse range of applications, from networking and bioinformatics to engineering design, routing, and scheduling. It presents the main design questions for all families of metaheuristics and clearly illustrates how to implement the algorithms under a software framework to reuse both the design and code. Throughout the book, the key search components of metaheuristics are considered as a toolbox for: Designing efficient

metaheuristics (e.g. local search, tabu search, simulated annealing, evolutionary algorithms, particle swarm optimization, scatter search, ant colonies, bee colonies, artificial immune systems) for optimization problems Designing efficient metaheuristics for multi-objective optimization problems Designing hybrid, parallel, and distributed metaheuristics Implementing metaheuristics on sequential and parallel machines Using many case studies and treating design and implementation independently, this book gives readers the skills necessary to solve large-scale optimization problems quickly and efficiently. It is a valuable reference for practicing engineers and researchers from diverse areas dealing with optimization or machine learning; and graduate students in computer science, operations research, control, engineering, business and management, and applied mathematics.

## STATISTICAL THEORY

## **A CONCISE INTRODUCTION**

**CRC Press** Designed for a one-semester advanced undergraduate or graduate course, Statistical Theory: A Concise Introduction clearly explains the underlying ideas and principles of major statistical concepts, including parameter estimation, confidence intervals, hypothesis testing, asymptotic analysis, Bayesian inference, and elements of decision theory. It i

# **DATA STRUCTURES AND ALGORITHMS IN JAVA**

**John Wiley & Sons** The design and analysis of efficient data structures has long been recognized as a key component of the Computer Science curriculum. Goodrich, Tomassia and Goldwasser's approach to this classic topic is based on the object-oriented paradigm as the framework of choice for the design of data structures. For each ADT presented in the text, the authors provide an associated Java interface. Concrete data structures realizing the ADTs are provided as Java classes implementing the interfaces. The Java code implementing fundamental data structures in this book is organized in a single Java package, net.datastructures. This package forms a coherent library of data structures and algorithms in Java specifically designed for educational purposes in a way that is complimentary with the Java Collections Framework.

#### **DATA STRUCTURES AND ALGORITHMS IN PYTHON**

**Wiley Global Education** Based on the authors market leading data structures books in Java and C++, this textbook offers a comprehensive, definitive introduction to data structures in Python by authoritative authors. Data Structures and Algorithms in Python is the first authoritative object-oriented book available for the Python data structures course. Designed to provide a comprehensive

introduction to data structures and algorithms, including their design, analysis, and implementation, the text will maintain the same general structure as Data Structures and Algorithms in Java and Data Structures and Algorithms in C++.

#### WIRELESS COMMUNICATIONS

John Wiley & Sons "Professor Andreas F. Molisch, renowned researcher and educator, has put together the comprehensive book, Wireless Communications. The second edition, which includes a wealth of new material on important topics, ensures the role of the text as the key resource for every student, researcher, and practitioner in the field." —Professor Moe Win, MIT, USA Wireless communications has grown rapidly over the past decade from a niche market into one of the most important, fast moving industries. Fully updated to incorporate the latest research and developments, Wireless Communications, Second Edition provides an authoritative overview of the principles and applications of mobile communication technology. The author provides an in-depth analysis of current treatment of the area, addressing both the traditional elements, such as Rayleigh fading, BER in flat fading channels, and equalisation, and more recently emerging topics such as multi-user detection in CDMA systems, MIMO systems, and cognitive radio. The dominant wireless standards; including cellular, cordless and wireless LANs; are discussed. Topics featured include: wireless propagation channels, transceivers and signal processing, multiple access and advanced transceiver schemes, and standardised wireless systems. Combines mathematical descriptions with intuitive explanations of the physical facts, enabling readers to acquire a deep understanding of the subject. Includes new chapters on cognitive radio, cooperative communications and relaying, video coding, 3GPP Long Term Evolution, and WiMax; plus significant new sections on multi-user MIMO, 802.11n, and information theory. Companion website featuring: supplementary material on 'DECT', solutions manual and presentation slides for instructors, appendices, list of abbreviations and other useful resources.

# **IMPACT EVALUATION IN PRACTICE, SECOND EDITION**

**World Bank Publications** The second edition of the Impact Evaluation in Practice handbook is a comprehensive and accessible introduction to impact evaluation for policy makers and development practitioners. First published in 2011, it has been used widely across the development and academic communities. The book incorporates real-world examples to present practical guidelines for designing and implementing impact evaluations. Readers will gain an understanding of impact evaluations and the best ways to use them to design evidence-based policies and programs. The updated version covers the newest techniques for evaluating programs and includes state-of-the-art implementation advice, as well as an expanded set of examples and case studies that draw on recent development challenges. It also includes new material on research ethics and partnerships to conduct impact evaluation. The

handbook is divided into four sections: Part One discusses what to evaluate and why; Part Two presents the main impact evaluation methods; Part Three addresses how to manage impact evaluations; Part Four reviews impact evaluation sampling and data collection. Case studies illustrate different applications of impact evaluations. The book links to complementary instructional material available online, including an applied case as well as questions and answers. The updated second edition will be a valuable resource for the international development community, universities, and policy makers looking to build better evidence around what works in development.

#### **FOOD ANALYSIS LABORATORY MANUAL**

**Springer Science & Business Media** This second edition laboratory manual was written to accompany Food Analysis, Fourth Edition, ISBN 978-1-4419-1477-4, by the same author. The 21 laboratory exercises in the manual cover 20 of the 32 chapters in the textbook. Many of the laboratory exercises have multiple sections to cover several methods of analysis for a particular food component of characteristic. Most of the laboratory exercises include the following: introduction, reading assignment, objective, principle of method, chemicals, reagents, precautions and waste disposal, supplies, equipment, procedure, data and calculations, questions, and references. This laboratory manual is ideal for the laboratory portion of undergraduate courses in food analysis.