

Book Reviews | Reseñas

ADVANCES IN DISTRIBUTION THEORY, ORDER STATISTICS, AND INFERENCE.

N. Balakrishnan, E. Castillo and J. M. Sanabria, Editors (2006)

Birkhäuser. Series Statistics for Industry and Technology

ISBN 10:0-8176-4361-3 ISBN 13:978-0-8176-4361-4 E-ISBN 0-8176-4487-3

LIII+483

This book contains a selection of the contributions presented in the DISTRIBUTION THEORY, ORDER STATISTICS, AND INFERENCE held at the Universidad de Cantabria in the period June 16-18 of 2004. This conference was a festivity to the 65th anniversary of the well know statistician Barry Arnold. His research has covered different areas of statistics and the topic of the conference are the main line of is contributions. A preface presents the oeuvre and the curriculum vitae of Prof. Arnold is printed where his 186 published contributions to statistical knowledge are listed. A rough division in 5 parts is made and they cluster 29 papers.

The first part clusters papers on Discrete Distributions an Applications. The first paper, due to P.J.Boland and H. Singh, gives an account on the stochastic order comparisons that may be developed between the sum of n Bernoulli random variables, with different parameters p_i and a Binomial $B(n, p)$. The second contribution is presented by C; Lefèbre and is concerned with the derivation of the exact distribution of the first crossing problem of a compound Poisson process with positive jumps (real valued) and non decreasing lower boundary. Its interest comes from the modeling of queues, risk theory and ruin. C. D. Lai is the author of the third paper where the existing methods for determining bivariate discrete distributions are discussed.

In its second part the papers deal with Continuous Distributions and Applications. The Normal-Laplace distribution and its relatives is the title of the first paper, due to W. J. Reed. The interest on this distribution is generated by its role in describing the stopped rate of a Brownian motion, where the starting value is generated by a Normal and the hazard stopping rate is constant. The role of it in the study of high frequency price data is pointed out. Related distributions are also presented due to their use in Finance and Insurance, as the study of logarithmic prices. The second paper is authored by A. Pewsey and presents a new proof of the well known Azzalini's lemma, published in 1985 in Scandinavian Journal of Statistics 12, 17-178. J. Sarabia and E. Castillo present the third paper where marginal models are proposed and a class of distributions whose conditionals are generalized 3-parameter Beta distributions. The fourth paper is authored by D. N. Naik and K. Plungplongpun and is devoted to the review the properties of Kotz's type distributions and to develop a Monte Carlo procedure for generating variables with that distribution. H. Joe is the author of the next paper discusses how multivariate normal copula simulations may be used for obtaining a distribution with correlations matrices with a given marginal. This part ends with a paper of M. D. Ruiz and J. M. Angulo, where some stable probability measures are derived through a Central Limit theorem.

The third part is concerned with the study of model based on order statistics. The first chapter is due to H.A. David who presents a panoramic of the development of the subject from the introduction of the term 'order statistics' by Wilks in 1942. A source of it is a recent book of the author ad A. W. F. Edwards (2001, Annotated Readings in the history of Statistics, Springer). The following chapter is due to H. N. Nagaraja and he discussed topics on the structure of the order statistics. Proprieties of the partial sums are derived. The distribution function of it when the distribution is exponential is derived for the iid and non-idd cases. Distributional representation of spacing is derived. N. Balakrishnan and T. Li are the authors of the other chapter They develop the likelihood for one-cycle ranked sets samples and comparisons s are developed for studying Fisher information and Tukey's linear sensitivity measure. Comparisons are developed using six distributions from the exponential family. O. Guilbaud presents a large discussion on coefficient of confidence for weighted means in the 14th chapter Hypothesis oh the shape; the symmetry and inimicality are used. Domination relations are derived. R. Gatto and S. R. Jammalmadaka provided representations that permit to compute the distribution of high-order spacing and spacing frequencies for small samples. Approximate P-values may be computed for moderate small sample sizes. T. Rychlik obtains bounds for the expiation of L-statistics independent of the location parameter μ .

Part 4 begins with a contribution of H. W. Block who introduced a general mixture for studying the behaviour of failure rates. The same author, together with M. G. Dugas and F. J. Samaniego derived necessary and sufficient conditions for the domination of one system by another one. J. Navarro, J. M. Ruiz and C. J. Sandoval uses the condition of exchangeability, of a multivariate Gumbel exponential distributed vector, for studying reliability, aging measures and the estimation of the parameter of a symmetric Gumbel distribution. Z. Chen, J. Mi and Y.Y. Zhou consider the Maximum Likelihood Estimation of the mean of the exponential distribution establishing the strong consistency and asymptotic normality of it. A. Sengupta studied the use of bivariate exponential conditionals for modelling accelerated life testing. The inferential problem is completely studied.

The last part deals with inferential problems. E. Castillo, C. Castillo, A. S. Hadi and J. M. Sarabia developed a general method and a closed formula for calculating local sensitivities. The methods are numerically illustrated. A. Garcia-Perez constructed analytical approximations for computing p-values for distributions in the attraction domain of a gaussian. They may be considered as robust procedures. M. Divinsky argues how chi square tests can be used through SAS System protocols increasing the reliability of the interpretation of the outputs. F. J. Giron, E. Moreno and M. L. Martinez developed the next chapter. They are concerned with the development of an objective Bayesian based method for variable selection in regression analysis. They argue that frequentist arguments are not reasonable. Another Bayesian approach paper is the next one due to T. K. Kayak and A. El-Baz who focus on admissibility aspects. L. Pardo and M. L. Menendez visited the problem of contingency tables analysis using ϕ -divergence measures test procedures. D. Peña dealt with dimension reduction in time Series and some examples were worked out using financial data. W. Go et al. considered coding theory problems and obtained an upper bound for the winning probability in the problem studied. And quoted some open problems. Some of the papers of this part can be hardly considered as connected with order statistical problems

The book is a good references source for persons involved with research in statistics, in different areas of science and technology and economics,

C. N. Bouza
Universidad de La Habana

SEMI-MARKOV CHAINS AND HIDDEN SEMI-MARKOV MODELS TOWARD APPLICATIONS THEIR USE IN RELIABILITY AND DNA ANALYSIS

V. Barbu and N. Limnios (2008)

Springer (Lecture Notes in Statistics Vol. 119

ISBN 978-0-387-74100-0

XI+ 230

£33.00

The authors stress how Semi-Markov (SM) Chains modeling plays a dominating role in DNA's reliability studies. They give a broad introduction, which includes the basics of discrete time renewal process and SM chains. Afterwards it is pointed out how to use, derived models, in the analysis of discrete time SM systems and in estimation of Hidden SM models. It should be of use for specialists involved with Biomathematics and by those working the area of Biotechnology.

J.C. Shong
Demeshonian College

DYNAMIC RANDOM WALKS: THEORY AND APPLICATIONS

Nadine Guilloin-Plantard, and Rene Schott (2006)

ELSEVIER

ISBN-13: 978-0-444-52735-6

ISBN-10: 0-444-52735-4

XII+278

GB£58,00

The authors provide an account on the probabilistic progresses realized in the field of dynamic random walks to the readers. Specific applications in computer science, mathematical physics and finance receive a detailed discussion. The researchers interested in the recent developments in probability theory and their applications will welcome it. The eleven chapters of the book contain introductory material for graduate students and are grouped in two parts.

Tajid H. Komir
Smith and King College

INTRODUCTION TO PRECISE NUMERICAL METHODS

Oliver Aberth (2007)

ACADEMIC PRESS

XV+272

ISBN-13: 978-0-12-373859-2

ISBN-10: 0-12-373859-8

US\$79,95

This publication examines computer methods for solving mathematical problems either exactly or to a prescribed accuracy. The book highlights computer methods for solving mathematical problems exactly or to a prescribed accuracy, and explains how to construct precise numerical analysis. A CD-ROM is provided and its executable. The author provides readers with specific examples of problems of elementary numerical analysis with precision as well as exercises.

Alfredo T. García Pedrosa

Colegio Panamericano de Computación Avanzada

PROBABILISTIC METHODS FOR FINANCIAL AND MARKETING INFORMATICS

Richard Neapolitan and Xia Jiang (2007)

MORGAN KAUFFMAN

X+ 432

ISBN-13: 978-0-12-370477-1

ISBN-10: 0-12-370477-4

GB£39,99

This book is a needed reference on the use of probabilistic methods for predicting how a certain financial technology behaves, as is the case in investment, advertising, operational risk measurement, credit scoring and related themes. Basic techniques are presented and the application in data management, data mining and other similar techniques of the so called Artificial Intelligence for business and marketing information leads its approach. The contents is Informatics and Bayesian Networks; Introduction to Informatics; Basics of Probability and Statistics; Algorithms for Bayesian Networks; Decision Trees and Influence Diagrams. II: Business Informatics: Collaborative Filtering; Targeted Advertising; Market Basket Analysis; Venture Capital Decision Making; Measuring Operational Risk; Credit Scoring. Applications to Investment Science.

J.C. Shong

Demeshonian College

THE PROBABILISTIC METHOD, 3rd edition

Noga Alon and Joel H. Spencer (2008)

Wiley

5

XII+384

ISBN: 978-0-470-17020-

This book is the third edition of well known oeuvre on the probabilistic methods in combinatorics. The book develops a discussion on techniques based on expectations and variances, martingales and correlation inequalities. It explores new and fruitful application areas of probabilistic methods as discrepancy and random graphs and theoretical computer science.

The present version reflects the reactions of the audiences as well as some of some other textbooks, at my guess.

Sovandep.H. Kumar

Institute of Computer Engineering and Business Management

REGRESSION ANALYSIS

Rudolf Freund, William Wilson and Ping Sa (2006)

ACADEMIC PRESS

XV+ 480

ISBN-13: 978-0-12-088597-8

ISBN-10: 0-12-088597-2

US\$ 93,95

Focusing on giving students an understanding of the purpose of regression analyses and model building a review of the basics and an introduction to Linear Models is given in the first chapter. Then Simple Linear Regression, Linear and Multiple Regression are treated where assessing fit and reliability for drawing conclusions are highlighted. The book demonstrates how to take in consideration the effect of Multicollinearity and the existence of problems with the model and/or the observations. In that spirit Nonlinear Models, the use of Indicator Variables, modeling with Categorical

Response Variables and Generalized Linear Models are discussed. This text is an excellent tool for learning how to use regression analysis techniques to solve and gain insight into real-life problems.

A.S. Akiva
Nosharkart Women College

STABILITY OF DYNAMICAL SYSTEMS

Xiaoxin Liao, L.Q. Wang and P. Yu (2007)

ELSEVIER
XVI+ 718

ISBN-13: 978-0-444-53110-0

ISBN-10: 0-444-53110-6
US\$150

The contents of the book is the following: Preface; Chapter 1. Fundamental Concepts and Mathematical Tools; Chapter 2. Linear Systems with Constant Coefficients; Chapter 3. Time-Varying Linear Systems; Chapter 4. Lyapunov Direct Method; Chapter 5. Development of Lyapunov Direct Method; Chapter 6. Nonlinear Systems with Separate Variables; Chapter 7. Iteration Method for Stability; Chapter 8. Dynamical Systems with Time Delay; Chapter 9. Absolute Stability of Nonlinear Control Systems; Chapter 10. Stability of Neural Networks; Chapter 11. Limit Cycle, Normal Form and Hopf Bifurcation Control. It may be considered as a good monograph that presents a state-of-the-art on the advances in fundamental stability theories and methods for dynamic systems, of ODE and DDE types, and in limit cycle, normal form and Hopf bifurcation control of nonlinear dynamic systems. Hence I consider that it is suitable for Graduate students in applied mathematics, mechanics, control theory, theoretical physics, mathematical biology, information theory, and scientific computation.

G.T. Das
Savindra Gupta. College

TABLE OF INTEGRALS, SERIES, AND PRODUCTS

Alan Jeffrey and Daniel Zwillinger (2007)

ACADEMIC PRESS
XII+ 1200

ISBN-13: 978-0-12-373637-6

ISBN-10: 0-12-373637-4
US\$94,95

A first edition dates to 1965. The new edition are the result of revisions and enlargements made regularly. This is the seventh edition and includes a fully searchable CD-Rom. The users are commonly professionals and student of Pure and applied mathematics, engineers, scientists and physicists. The **Contents** are tables of Elementary Functions; Indefinite Integrals of Elementary Functions; Definite Integrals of Elementary Functions; Combinations involving trigonometric and hyperbolic functions and power; Indefinite Integrals of Special Functions; Definite Integrals of Special Functions; Associated Legendre Functions; Special Functions; Hypergeometric Functions; Vector Field Theory; Algebraic Inequalities; Integral Inequalities; Matrices and related results; Determinants; Norms; Ordinary differential equations; Fourier, Laplace, and Mellin Transforms and the z-transform .

Inés N. Rodríguez Almendros
INMAT

A WAVELET TOUR OF SIGNAL PROCESSING: THE SPARSE WAY

Stéphane Mallat (2008)

ACADEMIC PRESS
XXVI+700

ISBN-13: 978-0-12-374370-1
GB£49,99

The author is a well known specialist in the area who can be considered as one of the gurus on wavelet signal processing. The contents are updated with all the cutting edge developments, such as multiwavelets, alpert, non-separable and quincunx wavelets. The book brings together principles and applications of wavelet signal processing and points out aspects of its intuitive understanding together with the mathematical foundations. A large set of real life applications are discussed covering noise removal, deconvolution, audio and image compression, singularity and edge detection, multifactorial analysis, and time-varying frequency measurements. It must be in the library of R&D engineers and university researchers connected with image and signal processing or Signal processing.

Ingram J. Brown
INMAT and Stat&OR Consult

WORKING WITH DYNAMIC CROP MODELS

Daniel Wallach, David Makowski and James Jones editors (2006)

ELSEVIER

ISBN-13: 978-0-444-52135-4

ISBN-10: 0-444-52135-6

XV+ 462

US\$87,95

This volume is dedicated to a very important and has two main objectives: the first is to show that bringing together different mathematical and statistical methods which are essential in crop modeling. The book presents mathematical and statistical methods, now accessible to crop modelers, which are necessary in the development, analysis and applications. It will be essential for learning and a reference source for those interested in understanding and applying theoretical methods to crop models. This book will also be of value for other specialties linked with dynamic models of complex systems.

The chapters are:

- 1 The two forms of crop models, D. Wallach
 - 2 Evaluating crop models, D. Wallach
 - 3 Uncertainty and sensitivity analysis for crop models, H. Monod, C. Naud, D. Makowski
 - 4 Parameter estimation for crop models, D. Makowski, J. Hillier, D. Wallach, B. Andrieu, M.-H. Jeuffroy
 - 5 Data assimilation with crop models, D. Makowski, M. Guerif, J. W. Jones, W. Graham
 - 6 Representing and optimizing management decisions with crop models J. E. Bergez, F. Garcia, D. Wallach
 - 7 Using crop models for multiple fields, D. Leenhardt, D. Wallach, P. Le Moigne, M. Guerif, A. Bruand, M. A. Casterad
 - 8 Introduction to section II
 - 9 Fundamental concepts of crop models illustrated by a comparative approach, N. Brisson, J. Wery, K. Boote
 - 10 Crop models with genotype parameters, M-H Jeuffroy, A. Barbottin, J. W. Jones, J. Lecoer
 - 11 Model assisted genetic improvement of crops C.D. Messina, K.J. Boote, C. Loffler, J.W. Jones, and C.E. Vallejos
 - 12 Parameterization and evaluation of a corn crop model, D. Wallach.
 - 13 Evaluation of a model for kiwifruit, F. Lescourret and D. Wallach
 - 14 Sensitivity and uncertainty analysis of a static denitrification model. B. Gabrielle .
 - 15 Sensitivity analysis of PASTIS, a model of nitrogen transport and transformation in the soil, P. Garnier
 - 16 Sensitivity analysis of GENESYS, a model for studying the effects of cropping system on gene flow, N. Colbach and N. Molinari
 - 17 Data assimilation and parameter estimation for precision agriculture with the crop model STICS, M. Guerif, V. Houles, D. Makowski and C. Lauvernet
 - 18 Application of extended and ensemble Kalman filters to soil carbon estimation, J. Jones and W. Graham
 - 19 Analyzing and improving corn irrigation strategies with MODERATO, a combination of a corn crop model and a decision model J. E. Bergez, J. M. Deumier and B. Lacroix
 - 20 Managing wheat for ethanol production. A multiple criteria approach C. Loyce, J. P. Rellier and J. M. Meynard
- It includes an Appendix with the needed. Statistical notions.

Irving A. Brown

Brown, Roura and Queiros Consultors S.A.

COMBINATORIAL OPTIMIZATION AND THEORETICAL COMPUTER SCIENCE: INTERFACES AND PERSPECTIVES

Vangelis T. Paschos , Editor (2008)

Wiley

ISBN: 978-1-84821-021-9

XII+544

US\$195,00

This book presents 19 chapters. Each of them was written by an expert. They are:

- Chapter 1. The Complexity of Single Machine Scheduling Problems under Scenario-based Uncertainty (M. A. Aloulou, F. Della Croce).
- Chapter 2. (Non)-Approximability Results for the Multi-criteria Min and Max TSP(1, 2) (E. Angel, E. Bampis, L. Gourvès, J. Monnot).
- Chapter 3. Online Models for Set-covering: the Flaw of Greediness (G. Ausiello, A. Giannakos, V. Th. Paschos).
- Chapter 4. Comparison of Expressiveness for Timed Automata and Time Petri Nets (B. Bérard, F. Cassez, S. Haddad, D. Lime, O. H. Roux).
- Chapter 5. A “Maximum Node Clustering” Problem (G. Carello, F. Della Croce, A. Grosso, M. Locatelli).
- Chapter 6. The Patrolling Problem: Theoretical and Experimental Results (Y. Chevalyere).
- Chapter 7. Restricted Classes of Utility Functions for Simple Negotiation Schemes: Sufficiency, Necessity and Maximality (Y. Chevalyere, U. Endriss, N. Maudet).

- Chapter 8. Worst-case Complexity of Exact Algorithms for NP-hard Problems (F. Della Croce, B. Escoffier, M. Kaminski, V. Th. Paschos).
- Chapter 9. The Online Track Assignment Problem (M. Demange, G. Di Stefano, B. Leroy-Beaulieu).
- Chapter 10. Complexity and Approximation Results for the Min Weighted Node Coloring Problem (M. Demange et al). Chapter
- 11. Weighted Edge Coloring (M. Demange et al).
- Chapter 12. An Extensive Comparison of 0-1 Linear Programs for the Daily Satellite Mission Planning (Virginie Gabrel).
- Chapter 13. Dantzig-Wolfe Decomposition for Linearly Constrained Stable Set Problem (Virginie Gabrel).
- Chapter 14. Algorithmic Games (Aristotelis Giannakos et al).
- Chapter 15. Flows! (Michel Koskas, Cécile Murat).
- Chapter 16. The Complexity of the Exact Weighted Independent Set Problem (Martin Milanic, Jérôme Monnot). Chapter
- 17. The Labeled Perfect Matching in Bipartite Graphs: Complexity and (in) Approximability (Jérôme Monnot).
- Chapter 18. Complexity and Approximation Results for Bounded-size Paths Packing Problems (Jérôme Monnot, Sophie Toulouse).
- Chapter 19. An Upper Bound for the Integer Quadratic Multi-knapsack Problem (Dominique Quadri, Eric Soutif, Pierre Tolla).

It will be useful for the specialists

Sovandep.H. Kumar
Institute of Computer Engineering and Business Management

PROBABILITY MEASURES ON SEMIGROUPS: CONVOLUTION PRODUCTS, RANDOM WALKS AND RANDOM MATRICES, 2nd edition

Mukherjea, Arunava, and Högnäs, Göran (2008)

Springer
XVIII+ 505

ISBN: 978-0-387-77547-0

This book provides the development of the theoretical concepts on Semigroups.- Probability Measures on Topological Semigroups.- Random Walks on Semigroups.- Random Matrices. This second Edition features various additions and improvements that have been developed recently in the field.

H.T. Wong
Smith and King College

AN INTRODUCTION TO LINEAR PROGRAMMING AND GAME THEORY, 3rd edition

Paul R. Thie, Gerard E. Keough Wiley (2008)

Wiley
XII+480

ISBN: 978-0-470-23286-6
US\$99,95

This third edition presents up-to-date material on computational techniques of linear programming and game theory . This is a beautiful book. Which guides the reader through the most important developments and explores applications of the topics in the social, life, and managerial sciences. It is a valuable addition to the library on the theme and a almost for anybody interested in obtaining a first hand information on the integration of new computer software and to the uses of LP Assistant, to assist the readers in learning and using the simplex algorithm, and the spreadsheet tool Solver to solve linear, non-linear, and integer programming problems.

V. I. Smith
Savindra Gupta College

QUALITATIVE DEVELOPMENT OF OPERATIONS RESEARCH AND MANAGEMENT SCIENCE

Volume 2: Classic Examples and Commentary

Heiner Müller-Merbach, (2008)

Springer Series: International Series in Operations Research & Management Science ,

ISBN: 978-0-387-72158-3

XII+300

92,40 €

The use of this books should help students, academics and practitioners related with Operations Research and Management Sciences (OR/MS), to have an idea of how the field have been developed. Without knowing the history you are unable project the future. This volume outlines how the qualitative to OR/MS was developed historically.

QUALITATIVE DEVELOPMENT OF OPERATIONS RESEARCH AND MANAGEMENT SCIENCE

Heiner Müller-Merbach, (2008)

Volume 3: Classic Examples and Commentary

Springer Series: International Series in Operations Research & Management Science

ISBN: 978-0-387-72161-3

XIV+300

92,40 €

This book is the sequel of volume 2. It deal with the development of the quantitative approach, the most commonly used, of OR/MS. The work of the pioneers is the hard core and allows to better understanding the history of the quantitative school.

V. I. Smith
Savindra Gupta College

ASPECTS OF BROWNIAN MOTION

Roger Mansuy and Yor Marc (2008)

Springer Series: Universitext

ISBN: 978-3-540-22347-4

VII+ 210

39,95 €

At the turn of the millennium there has been a general acceptance that a practical improvements for overcoming the shortfalls of the classical Black-Scholes model is to replace the underlying source of randomness, a Brownian motion by a Lévy process. Nevertheless, stochastic calculus and excursion theory are very efficient tools for obtaining either exact or asymptotic results about Brownian motion and related processes. This book deals the old approach based on Brownian motion and is concerned with the usual discussion of Gaussian subspaces of the Gaussian space of Brownian motion, Brownian quadratic functionals; Brownian local times, Exponential functionals of Brownian motion with drift, Winding number of one or several Brownian motions around one or several points or a straight line, or curves and Time spent by Brownian motion below a multiple of its one-sided supremum.

Juan C. Camejo López
INMAT

FUZZY CHOICE FUNCTIONS – A REVEALED PREFERENCE APPROACH

Irina Georgescu (2007)

Springer Series Studies in Fuzziness and Soft Computing: Vol. 214

ISBN 978-3-540-68997-3

The book develops contents on rationality, revealed preference, congruence, Consistency of different fuzzy choice functions; deals with other ones as the degree of dominance, similarity, indicators of rationality and specific to a fuzzy approach to choice functions and to show thow some problems of multicriterial decision making problems may be solved in a fuzzy set framework.

The book is divide in 11 chapters: Introduction, Preliminaries, Classical Revealed Preference Theory, Fuzzy Preference Relations, Fuzzy Choice Functions, Fuzzy Revealed Preference and Consistency Conditions, General Results, Degree of Dominance, Similarity and Rationality Indicators for Fuzzy Choice Functions, Applications, and Concluding Remarks. The references contains 120 entries.

ANALYSING ECOLOGICAL DATA

Zuur, A. F., Ieno, E. N., and Smith, G. M. (2007)

Springer, .

XXVI + 672

ISBN 978-0-387-45967-7

US\$84.95/€64.95.

This book is divided into two parts. The first one reviews statistical methods commonly used in ecology of the methodology: data management, software selection, exploratory data analysis, linear regression, generalized linear models, additive and generalized additive modeling, mixed modeling. Then the rest reviews a large number of methods commonly used by ecologists but not common to statistical courses: tree models, Q and R association models, principal

components, redundancy models, correspondence analysis, discriminant analysis, principal coordinate analysis, time series, lattice data, and spatial modeling. The second part of the book presents case studies. It should be a good source for post graduate courses for ecologists.

J.C. Shong
Demeshonian College

DATA MINING: METHODS AND MODELS

D. T. Larose (2006)
John Wiley and Sons
XVI+. 344

ISBN 978-0-471-99956-1
€79.90

We may consider this book as a sequel to *Discovering Knowledge in Data: An Introduction to Data Mining* which was published in 2005 by the same author and a motivation, to *Data Mining the Web: Uncovering Patterns in Web Content, Structure, and Usage*, of him with M. Markov (2007). The core of the philosophy is on the dialectic of white box-black box. It is quite confusing for newcomers. Using white box as a touch stone he sustains that the different data mining algorithms can be described at large. Computer software are used, as WEKA available in the WEB by free. A web site of the author provides needed complements.

The data issues of the first part of the book are connected with principal components analysis, factor analysis, multiple regression, variable selection, logistic regression, and Bayes' methods, (Naïve Bayes, Bayesian belief networks), all them statistical themes, and genetic algorithms. The methods as well as the discussion, are rather too conventional, specially in variable selection where, the discussion is not more than those present in classic text books. The last chapter discusses a problem and uses the presented tools.

I am surprised of the lack of use of some commonly used tools in data mining as cluster analysis and tree classifiers. I was shocked when, afterwards, clustering is used in the analysis of the problem of chapter 7. A comment on the inclusion of a chapter on genetic algorithms. At my knowledge genetic algorithms are some type of optimization procedure. Why there is not a presentation of optimization methods theory?

H. T. Sugeno
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