

News/Anuncios

| Conference and Place/ Conferencia y Lugar | Date and Contacts/ Fecha y Contactos |
|--|---|
| Annual Meeting of the Statistical Society of Canada Halifax, Canada | 8-11 June, 2003 C. Field (field@mscs.dal.ca) |
| International Conference on Advances in Statistical Inferential Methods Almaty, Republic of Kazakhstan | 9-12, June, 2003 Hoodashtian (hoodash@kimep.kz), V. Voinov (voinov@kimep.kz) |
| 23 rd International Symposium on Forecasting (ISF2003) Merida, Mexico | 15-18, June, 2003 V. Aguirre (aguirre@itam.mx) V. Guerrero (guerrero@itam.mx) |
| 4 th International Workshop on Objective Prior Methodology Aussois, France | 15-20 June, 2003. C.P. Robert (xian@ceremade.dauphine.fr) |
| ICSA 2003 Applied Statistics Symposium San Diego, USA | 22-24, June 2003. N. Lo (Nancy.Lo@NOAA.GOV) |
| International NAISO Symposium on Information Technologies in Environmental Engineering (ITEE'2003) Gdansk, Poland | 24-27 June www.isc-naiso.org/conferences/itee2003/index.html |
| International Conference on Correspondence Analysis and Related Methods (CARME 2003) Barcelona (Catalonia), Spain. | 29 June- July 2, 2003 www.econ.upf.es/carme carme2003@upf.es |
| International Conference on Robust Statistics 2003 (ICORS2003) Antwerp, Belgium | 14-18 July, 2003 S. Van Aelst (stefan.vanaelst@ua.ac.be) G. Byrs (statis@uia.ua.be) |
| Conference on e-training Practices for Professional Organizations Pori, Finland | 14-18, July, 2003 multisil@pori.tut.fi , www.pori.tut.fi/etrain/ |
| School on Systems of Polynomial Equations: from Algebraic Geometry to Industrial Applications Buenos Aires, Argentina | 14-25 July, 2003 www.mathdoc.ujf-grenoble.fr/CIMPA/cimpa@unice.fr |
| 24 th Meeting of the International Society for Clinical Biostatistics London, UK. | 20-24 July, 2003 www.iscb-homepage.org diana.elbourne@lshtm.ac.uk |
| Congreso Español de Estadística e Investigación Operativa Lleida, Spain. | 2003. www.matematica.udl.es/seio2003/seio2003@matematica.udl.es |
| 21 st IFIP TC7 Conference on System Modelling and Optimization Sophia Antipolis, France | 21-25 July, 2003 www.devinci.fr/cs/ifip |
| Semantics and Applications Montevideo, Uruguay | 21 July- 1 August, 2003 www.mathdoc.ujf-grenoble.fr/CIMPA/cimpa@unice.fr |
| 3 rd International Forum on Statistical Reasoning, Thinking and Literacy (SRTL-3) Lincoln, (Nebraska) USA | 23-28 July, 2003 W. Mickelson (wmickelson2@unl.edu) |

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| Justus F. Seely Memorial Conference on Linear Models Corvallis (Oregon), USA | 31 July-1 August, 2003. A. Qu (qu@stat.orst.edu) D. Birkes (birkes@stat.orst.edu) C. Pereira (pereira@estat.org.edu) |
| 2003 Joint Statistical Meetings San Francisco (California), USA | 3-7 August, 2003 L. Minor (meetings@amstat.org) |
| 12 th International Workshop on Matrices and Statistics Dortmund , Germany | 5-8 August , 2003 G. Trenkler (iwms2003@statistik.uni-dortmund.de) |
| 54 th Session of the International Statistical Institute Berlin, Germany | 13-20 August, 2003 G. Schuyten (gilberte.schuyten@rug.ac.uk) isi@cbs.nl . www.isi-2003.de |
| Mathematic Workshop for Latin America and the Caribbean Cuernavaca, Mexico | 28 August-6 September 2003 www.mathdoc.ujf-grenoble.fr/CIMPA/cimpa@unice.fr |
| 5 th International Workshop on Operations Research: Applications to Economical Problems Habana, Cuba | Sometime in the first half of September, 2003. sira@matcom.uh.cu guddat@mathematik.hu-berlin.de |
| 2 nd International Conference on Evolutionary Multicriterion Optimization (EMO'2003) Kanpur, India | E. Zitzler (zitzler@tik.ee.eth.ch) K. Deb (deb@litc.ch.in) |
| School on Scientific Computing Nice Sophia-Antipolis, France | Sometime in September, 2003 www.mathdoc.ujf-grenoble.fr/CIMPA/cimpa@unice.fr |
| World Summit on Information Society Geneva, Switzerland | 10-12 december , 2003. www.geneva2003.org info@geneva2003.org |
| 6 th International Conference on Operations Research Habana, Cuba | Sometime in the first half of March, 2004. sira@matcom.uh.cu guddat@mathematik.hu-berlin.de |
| Annual Meeting of the Statistical Society of Canada Montreal , Canada | 30 May-2 June 2, 2004 C. Léger (leger@dms.umontreal.ca) |
| 10 th International Conference on Mathematical Education (ICME 10) Copenhagen, Denmark. | 4-11 July www.ICME-10.dk |
| 25 th Meeting of the International Society for Clinical Biostatistics Leiden, Netherlands | 20-24 July, 2004 www.iscb-homepage.org jcvanhouwelingen@lucm.nl |
| 2004 Joint Statistical Meetings Toronto (Ontario), Canada | 8-12 August, 2004 L. Minor (meetings@amstat.org) |
| 24 th Session of SCORUS Nairobi, Kenya | Sometime in 2004 M. Raj (markandey.raj@unchs.org) |
| 55 th Session of the International Statistical Institute Sydney, Australia. Includes the meetings of the Bernoulli Society, International Association for Statistical Computing, International Association of Survey Statisticians, International Association of Official Statistics and the International Association for Statistical Education) | 5-12 April, 2005 A. Harris (annette.harris@abs.gov.au) . isi-2005@tourthosts.com.au |
| Annual Meeting of the Statistical Society of Canada Saskatoon, Saskatchewan, Canada | Sometime in the Summer of 2005 www.ssc.ca |



Contact: Neville de Mestre [anziam@iciam.org]

Some Interest Embedded Meetings

● **6th Australian-New Zealand Mathematics Convention**

Professor [Hendrik Lenstra](#) of the [University of Leiden](#) has agreed to accept the Australian Mathematical Society's [Mahler Lectureship](#) for 2003..

● **11th Computational Techniques and Applications Conference**

. Further details on CTAC 2003 may be found on <http://www.aeromech.usyd.edu.au/ctac2003>.

Contact: Jerard Barry [ctac@iciam.org]

● **6th Engineering Mathematics and Applications Conference**



Contact: Gary Fitz-Gerald [emac@iciam.org]

● **17th National Conference of the Australian Society for Operations Research**



Contact: Simon Perkins [asor@iciam.org]

● **2nd National Symposium on Financial Mathematics**

Contact: Eckhard Platen [nsfm@iciam.org]

Book Reviews/Reseñas

Modeling Longitudinal and Multilevel Data: Practical Issues, Applied Approaches and Specific Examples

T.D. Little, K.U. Schanabel and J. Baumeister (Editors) (2001)
Lawrence Erlbaum Associates vii+297

This book presents in 14 chapters contributions to the Conference and the Summer School developed in Berlin in the period 1997-98. The themes are of interest to statisticians but mainly for those involved with applications in the Social Sciences. Chapter 1 fixes the objective of the book and a review is given. Chapter 2 describes different approaches that can be used for a problem using Multilevel Models (regression, structural), latent curves etc. Chapter 3 presents multilevel structural equations models for longitudinal research and Chapter 4 is devoted to a similar task using multivariate data. Chapter 5 discusses the use of the latent growth and structural models in identification while the next is devoted to multistage models and the following revisits the theme of Chapter 5 in simultaneous modeling of change patterns. Chapter 8 deals with the non-continuous problematic of the discussed methods. Chapter 9 investigates the testing of hypothesis involved in the different themes. The next 3 chapters provide a study of the missing data and the common solutions. The rest state the future direction of structural equation modeling and the application of the Maximum Likelihood principle as alternative to the common variance-covariance methods.

*A.D. Chakraborty
Smith and King College.*

Linear Models: Least squares and its alternatives

C. R. Rao and H. Toutenberg (1999)
Springer Series in Statistics
XV+427 ISBN 0-387-98848-3

This is the second edition of the same book, which has another two reprints. That makes of it a remarkable book without looking at the name of the authors. In this edition there are additions in Chapter 3 (neural networks is the most exciting), Chapter 4 (mainly by developing Bayes empirical procedures). The authors produced a deep revision of Chapters 2, 8 and 10.

This edition is sufficiently new for recommending it again to mathematical statisticians.

*N.S.R. Bhat
Bhat & Sarkar Consultants*

Statistical and Data Handling Skills in Biology

R. Ennos (2000).
Prentice Hall x+132 ISBN 0-582-31278-7

As expected it is a book designed for very specialized persons. It has 7 chapters dealing with measurement, variation, testing for differences, finding associations, categorical data analysis, selection of appropriate tests and designs. An Introductory chapter places the objectives and how to handle with the book. Several examples are developed. It should be useful as a consult book for researchers.

*Arun K. Ray
Moderns School of Computer Sciences and Administration*

What is Random? Chance and Order in Mathematics and Life

E. Beltrami (1999)
Copernicus xx+202 ISBN 0-387-98737-1

The introduction of Statistics and Probability in primary school is a need that is being fulfilled in many countries. Adults are not aware of what randomness is and children ask. The need to cope with this concept

for dealing with external life, home matters included now. This book presents different interpretations of randomness. A particular problem is if it is inherent to a mechanism, that generates the sequence, or it is randomness of the sequence. This dialectic relation is analyzed and discussed from several points of view. The mathematics used is very elemental. The first chapters give a historical sketch of probability going from gambling at the French court to computers. The second uses the point of view that the important is the behavior of the sequence (entropy, test of randomness based on the behavior of the sequence) and the third establishes that under certain conditions a 'random sequence' may be conduct to another deterministic sequence. The need of knowing the randomness of the generator is apparent and through discussions some main ideas are rooted. Chapter 4 places the role of randomness in the study of algorithms (complexity, Turing's machines etc) and the following speculates on the randomness of some life events.

At this divulgative level adults, without a good mathematics as background, will be able to understand what is randomness.

S. K. Barana
Sarkar Computer College

Model Building in Mathematical Programming

H.P. Williams (1999)
Wiley xii+354 ISBN 0-471-99788-9

The first edition of this book is dated 1978. This is an updated version. The emphasis is made in modeling, which is often neglected in our courses. This fact makes the book a good acquisition by the operations researchers specialists and teachers. A first part is devoted to models of mathematical programming and the other to present 24 problems and discuss their solution. It is remarkable how the author dealt with each problem: modeling and solving using different point of view leading to different models. The package used in the examples was XPRESS-MP. A large list of references is given

Rita C. Anis
Smith and King College

Probability for Statisticians

G.R. Sherack (2000)
Springer Verlag
xvii+585 ISBN 0-387-98953-3

The book gives a complete and comprehensive introduction of Probability and Stochastic Processes. It may be used for teaching (it is a lecture-based book). We have in it the presentation of a probability course for 'would be' theoretical statisticians. As a statistician I consider that the contents on Stochastic Processes have a too large weight in the book. This conveys to a somewhat 'hard to understand full-text' for beginners.

It is remarkable the discussion of Empirical Processes. I recommend it for graduate courses for statisticians.

Ruma Pal
Sarkar Computer Science College

Statistical Inference in Science

D.A. Sprott (2000)
Springer Verlag xv+245 ISBN 0-387-95019-2

Following his proposal of basing statistical analyze in the likelihood, that is the approach of the book as expected from Prof. Sprott, being him a distinguished specialist in this theme. After discussing the role of Statistics in the sciences, briefly, the use of likelihood as a principle and an approach for deriving adequate methods is introduced. Different examples are discussed in depth and the approach appears as the best one to be used if you are scientifically minded. The collection of examples used for given sound basis to his affirmation is very good. Chapter 5 discusses how to use (interpret) Likelihood confidence intervals and chapter 6 makes a similar with the testing of hypothesis. The next three chapters are concerned with the more complicated problems of the general location, location-scale pivotal modeling as well as of the deducible normal distribution problems. Chapter 10 surveys experimentation.

The book gives to the statistician a 'whole' treatment of Statistics through the point of view of likelihood Principle. The examples are very illustrative for being used in classes. I highly recommend it.

Boru Sarkar
Sarkar Computer Science College

Nichtparametrische Verfahren der Statistik

R. Hafner (2001)
Springer Verlag viii+233

We should look at this book as a text in nonparametric inference in line with classics as J.D. Gibbons (1985, Nonparametric Methods for Quantitative Analysis, American Science, New York) and E.H. Lehman (1975, Nonparametric: Statistical Methods Based on Ranks, Holden-Day, S. Frco.). It includes some somewhat newly developed methods such as density function estimation, regression and survival analysis. I recommend it for german spoken courses.

*J. Scheneweiss
Ishinomaki School of Bussiness Administration*

Stochastic Analysis and Mathematical Physics. ANESTOC's 98. Proceeding of the 3rd International Workshop

R. Rebolledo (Editor) (2000)
Springer Verlag vii+166

This is a volume of the series "Trends of Mathematics" and contains contributions from the participants in the 3rd International Workshop on Stochastic Analysis and Mathematical Physics which took place in Santiago de Chile in 1998. The more important themes of the published papers are Birth-Death Processes, Markov Processes, Semigroups and quantum problems.

*A.M. Das
Arrow's Science College*

Integrated Assessment of Ecosystem Health

K.M. Scow, G.E. Fogg, D.E. Hinton and M.L. Johnson (2000).
Lewis Publishers ISBN 1-56670-453-7

This book contains the proceedings of the conference "From Cumulative Impacts toward Sustainable Solution, Critical Methodologies for the Study of Ecosystem Health." It was held in September 1996 at the University of California, Davies Camp. The papers cover different fields of knowledge. Three sections cluster the papers: Fate, Effects and Risks. The last one is of particular interest for Decision-Makers specialists.

*Lakshmi C.P.Pereira
Noskarhat Women's College*

Encyclopedia of Operations Research

S. I. Gass and C.M. Harris (2001)
Kluwer Publishers Inc. xiii+917 ISBN 0-7923-7827X

As expected it gives an encyclopedic information A needed book in the Mathematical Department Library.

*Narayan L. Cheng
Smiths and King College*

Essays in Metaheuristics

C.C. Ribeiro, and P. Hansen, editors (2000)
Kluwer Publishers Inc. xii+651 ISBN 0-7923-7520-3

It is the proceeding's book of the 3rd Metaheuristics International Conference held in Angnas das Reis, Brazil in 1999. The papers covers Tabu Search (4 papers), Traveling Salesman-Search (5), simulated Annealing (3) Network and Routing (5) and 9 in other different themes as Ant-colony , multiobjective etc. It will be of interest for the persons working in the theme.

*Chandra M. Peres
Smith and King College*

Linear Programming

R.J. Vanderbei (2001)
Kluwer Publishers Inc. xviii+450 ISBN 0-7923-7342X

This is the second edition of oeuvre. It includes new results. If you have enjoyed the use of the previous one is Ok to have the new one. There are serious improvements in network flows, convex optimization and in the algorithms. New examples are available in the net at /princeton.edu/~rudb/Lpbook/ .

*Narayan L. Cheng
Smith and King College*

Encyclopedia of Biopharmaceutical Statistics.

S.C. Chow (editor) (2000)
Dekker xiv+536 ISBN 0-8247-6001-8

As expected it is a collection of papers: 78 papers from 72 authors. Each theme treats a specific problem considered important for Biopharmaceutical research. It can be looked as a Handbook.

*Susmita P. Dutta
Smith and King College*

Dynamical Search: Application of Dynamic Systems in Search and Optimization

L. Pronzato, H.P. Wynn and A. Zhigljaurki (2000)
Chapman and Hall-CRC vii+222 ISBN 0-8493-0336-2

This book has been written by a set of experts in the theme. It has 8 chapters. The first one is introductory, the second discusses the concept of consistency and the third introduces the concepts related with renormalization and it is connected with the next one which deals with the relations between the kernel of a dynamic system (the re-normalization) and the rate of convergence. The rest of the book presents different classes of search algorithms (ellipsoidal, steep descent, etc). It is valuable for the persons dealing with discrete optimization, and the computation involved.

*P.D. Bandhari
ORCON-Limited*

Meta-heuristics: Advances and Trend in Local Search: Paradigms for Optimization

S. Voß, S. Martello, I. Hosman and C. Roucairol , editors (1999).
Kluwer Publishers Inc. And INRIA xii+511 ISBN 0-7923-8369-9

This book presents a collection of papers discussed at the Second International conference on Metaheuristics held in Sophia-Antopolis in 1997. As expected there are a lot of high level papers but the interest depends on your specialization. It will be valuable to buy it only for having in a specialized library, not for personal use.

*Ravindra C. Dep
Bhat and Sarkar Consultors*

Qualitative Methods in Management Research

E. Gummerson (2000)
Sage Publications Inc. xii+250 ISBN 0-7619-2014-5 & ISBN 0-7619-2013-7

The book faces problems that managers should face from a qualitative point of view. The author suggests new ways of looking at them and proposes that to fix a deal between soft and hard approaches is the best for the manager. Academicians should read it, practitioners must.

*S.K. Barana
Sarkar Computer Science College*

Multiobjective Optimization Using Evolutionary Algorithms

K. Deb (2001)

Wiley xx+497 ISBN 0-471-87339X

This book is OK for having a copy in the Mathematical Department's library. It presents the basic elements in the first 4 chapters. They may be used as a consult for some courses. The no elitist models are presented in chapter 5 and the elitists in the next chapter. (Theory and algorithms). Chapter 7 deals with constrained optimization. Chapter 8 presents the state of the art in the theme and some open research problems. Finally chapter 9 discusses some applications.

*Swati N, Roy
Smith and King College*

Discrete Gambling and Stochastic Games

A.P. Maitra and W.D. Sudderth (1996)

Springer xxi+244 ISBN 0-387-94628-4

This book is designed for the reading of persons interested in gambling, practical or only curious. They should have a mathematical skill because it presents a mathematical treatment of gambling through 7 chapters. Its content may be of interest also if you are connected with Game Theory. It deals only with a countable space of events. The first 4 chapters present newly, as announced, the results of L.E. Dubin and L.J. Savage [1965, How to Gamble If You Must: Inequalities for Stochastic Processes, Mc Graw Hill]. Chapter 5 discusses the problems arising when the gamble's set depends only of the current state. Chapter 6 covers the approximation of general pay-off functions and the next deal with the trials in two-player zero-sum stochastic games and the existence of a value.

Its value is in the use you plan for it. If you are a winner-gambler: do not read it. If you are a loser-gambler read it for knowing the reasons of your 'bad luck'. But remember you should have some mathematical knowledge.

*S.R.P. Sitha
Smith and King College*

Finite Dimensional Convexity and Optimization (2001)

Monique Florenzano and Cuon Le Van

(in cooperation with Pascal Gourdél)

Serie Studies in Economic Theory 13.

Springer Verlag, Berlin. ISBN 3-540-411515-5

ix_154

This book presents the basic theory of Convex Analysis needed for coping with different economic and optimization theoretical problems. It consists of 8 chapters and an appendix.

Chapter 1 presents basic aspects of convexity in \mathbb{R}^n . It, together with the two following chapters provides an almost complete discussion of the main theory of convexity in \mathbb{R}^n .

Chapter 4 deals with Linear Programming and it presents an introduction to this optimization problem through 7 propositions and a corollary. 14 theoretic problems are proposed. Chapter 5 retakes the problem of convexity by studying the properties of the class of functions $G = \{g|g: \mathbb{R}^n \longrightarrow \mathbb{R} \cup \{+\infty\}\}$, classic results in convexity as Jensen inequality are revisited through 6 propositions, 2 corollaries and 2 theorems. 20 exercises are proposed. The next chapter has a similar pattern when it presents the Differential Theory of Convex Functions. Chapter 7 deals with the solution of $\text{Min} \{f(x) \mid x \in C\}$, C a convex non empty set of \mathbb{R}^n . The needed conditions for the existence of a solution and the Kuhn-Tucker Conditions are discussed and 4 theorems, 7 propositions, 3 lemmata and 4 corollaries are provided while 13 exercises are proposed to the reader. The last chapter is devoted to the analysis of non convex optimization.

The Appendix is also of a theoretical nature and presents well known results.

A list of 62 titles is listed in the bibliography. Most of them are of the last decade.

It is a remarkable book which presents in condensed high theoretical way results of great interest for those who want to obtain a look into the mathematics that sustains Game Theory, Mathematical Economics and related topics.

I highly recommend it as a text in Ph.D. level courses .

*Carlos Bouza
Universidad de La Habana*

Mathematical Finance

Workshop of the Mathematical Finance Research Project
Konstanz, Germany (October 5-7, 2000).
Michael Kohlman and Shanjian Tang Editor s (2001),
Trends in Mathematics Series
Birkhäuser Verlag ISBN 3-7643-6553-6 374 pp

This book contains the contributions to a workshop on Mathematical Finance held in Konstanz in the centenary of the publication of the seminal work of L. Bachelier: Théoreme de la Spéculation. It was attended by more than 82 specialists from approximately 20 countries.

Contributions in dynamical financial problems, portfolio selection, interest rate theory, hedging contingent claims, risk sensitive asset allocation and irreversible investment constituted the main group of papers. Some contributions dealt with modeling makets using fractional Brownian Motion Theory and practitioners contributed with very interesting papers.

It is an interesting book for practioners and theoreticians because the exchange of results means a source of new ideas for economists as well as for mathematicians.

*Reneé Hampekamp
Ishiomaki Business School*

Gestión de la producción ganadera. Modelos, técnicas y aplicaciones informáticas.

Concepción Moroto Alvarez, Jesús Arias Arias, Laureano Gallego Martínez
y Antonio Torres Salvador (1997).
Ediciones Munde-Prensa y Caja Rural

Esta es una obra divulgativa de la aplicabilidad de las técnicas mas simples de la Investigación Operativa al manejo agrícola. A pesar de que los antecedentes en el mundo occidental se refieren a la determinación de una dieta óptima, dista mucho de ser el manejo agrícola donde se aplica con frecuencia esta disciplina. No deben buscar en este libro los 'optimizadores' nada más allá de ejemplos de como usar la programación lineal y la multiobjetivo, entre otras técnicas, en problemas agrícolas. Los especialistas de la agricultura encontrarán una apertura a sus enfoques para planear y manejar 'óptimamente' no solo la ganadería sino una amplia gama de aspectos prácticos.

Los 8 capítulos son escritos por algún subconjunto de los autores. Dos tratan de la Programación Lineal : conceptos necesarios y la solución de problemas concretos (dietas-pienso, transporte, trasbordo, asignación planeamiento de inventarios, etc.). Las "programaciones " (lineal n no lineal, entera, multicriterio) constituyen el tema de otro capítulo y la cuestión informática el de otro. El resto es dedicado a enfrentar problemas populares de manejo ganadero y planificación de la estructura de rebaños, dieta óptima, asignación de recursos y fechas de alumbramiento por mencionar algunos.

Esta es una obra recomendable para investigadores agrícolas, para que vean en que puede servirles las técnicas de la programación matemática (no solo la estadística es usable en esa área), y los optimizadores-maestros para ver ejemplos de interés para sus alumnos.

*Nadía Cruz
INMAT
División Biometría*

Series Statistics for Industry and Technology (SIT)

N. Balakrishnan, S. Ermakov and V.B. Melas (Editors) (2000)
Advances in Stochastic Simulation Methods
Birkäuser Verlag. 462+xvi pages. ISBN 3-8176-4107-6

The book serves as the Proceedings of the III St. Petersburg Workshop on Simulation and presents a set of refereed selected papers. It is a traditional workshop and it was held in the period June 28-July 3, 1998.

The book is divided into 4 parts:

Part 1. Simulation Models.

It contains 5 papers which deal with models for solving Non-algebraic Equations, Monte Carlo Algorithms for the solution of Neumann boundary value problems, the estimation of smooth functional and recursive state equations of Lindley type.

Part 2. Experimental Designs.

Statistical problems are mainly treated. The papers related with regression tackle E-optimal designs for polynomial regression, the characterization of designs which are robust in the presence of non-responses and/or non-homocedasticity of the residuals and the construction of locally Φ -optimal designs for non-linear regression. The other contributions deal with the research on the robustness of minimax designs for binary models, the impact of consistency in the Least Squares methods used for experimental design, the generation and classification of regularly blocked fractional designs and the symmetry in convex optimization. The title of paper has a misspelling in the title.

Part 3. Statistical Inference.

It contains contributions which play a role in the derivation of approximative results in order statistics and other related problems as the construction of confidence intervals for parameters of Pareto's distributions and the ranking of normal populations in terms of the larger absolute value of the theoretical mean. Resampling procedures for linear regression, results on matrix optimization with application to finite automata and the discussion of improvements of asymptotical results of chi-square tests derived under hypothesis of Maximum Entropy holds are the themes of the rest of the papers.

The contributions are mainly theoretical but different algorithms are discussed and some examples are developed. The published papers produced more than 40 tables and 15 figures.

Nadia Cuesta
División de Biometría
INIA

Interactive Operations Research with MAPLE. Methods and Models

M. Parlar (2000)
Birkäuser Verlag 488+x pages. ISBN 3-8176-4165-3

This book is an addition to the collection of oeuvres related with the practical use of Operations Research titles.

A collection of codes can be composed through their discussion in the different chapters.

The book is set out in 10 chapters.

The chapters Introduction to Operations Research, A Quick Tour of MAPLE 5, MAPLE and Mathematical Foundations of Operations Research constitute a good all account of basic topics. The rest of the chapters provide a brief look of theoretical models, examples are worked out the needed MAPLES's statements are presented and the codes for solving them are given. They cover Linear Programming, Non Linear Programming, Dynamic Programming, Stochastic Processes, Inventory Models, Queueing Systems and Simulation. Each chapter consists of an introduction to the theme, a summary and a set of exercises. A complete set of Maple's worksheets can be downloaded from the authors's web-site

[www.business.mcmaster.ca/msis/profs/parlar]

of from the editorial's web

[www.birkhauser.com/cgi-win/isbn3-8176-4165-3]

A list of 200 references, most of them recent, is given at the end of the book.

This book should be certainly useful enough to merit a place in the shelf of both practitioners and professors of Operations Research.

Sira M. Allende Alonso
Facultad de Matemática y Computación
Universidad de La Habana

Resampling Methods. A Practical Guide to Data Analysis

[Second Edition]

Phillip I. Good (2001)

Birkhäuser Verlag xii+236 A.G., Berlin.

ISBN 0-8176-4243-9 ISBN 3-7643-4243-9

This book presents the fundamentals of Statistics from the a challenging perspective: the data should provide the insight for inferencing. It has 11 chapters and 3 Appendixes. It is the second edition. The reader will obtain from its contents a guide for applying known methods, interpreting results and developing new procedures using permutation tests, bootstrap and cross-validation. They are useful alternatives for tackling statistical problems when the usual models fail. Hence I recommend it or research professionals who uses statistics. The way in which Statistics is presented suggests to use the book in introductory courses without previous Mathematical Analysis requirements.

The first chapter is devoted to Descriptive Statistics and a motivating discussion means from a practical problem which poses the need of using location and dispersion measures. The second and third chapters deal with testing hypothesis. A practical problem is described and the lack of information, the not so unusual missing of control of the labels on experimental units, suggests to use a permutation test. This is a remarkable discussion of this subject currently misused and misinterpreted. After discussing different aspects of this approach the basic theoretical aspects are set. Some of the discussed tests are not treated in depth in many courses. In his book they are motivated before their presentation. They are close related with ideas that place the need of re-sampling. Among them are Behrens-Fisher test and Pitman's correlation. Bootstrap is introduced and the disadvantages and advantages of using it are stated. This discussion took place without assuming a distribution which is very suggesting for soft-science's practitioners.

Chapter 4 goes in a more usual way: the distribution is known. Then well known tests as well as the Binomial one are presented. The way of describing estimation problems [Chapter 5] and the Power of a Test [Chapter 6] is a distinctive feature of the book.

Chapter 7 is dedicated to Categorical Data Analysis, mainly Chi-Squared tests, Chapter 8 to the design and analysis of experiments and Chapter 9 to some problems with multiple variables.

Chapter 10 [Model Building] is concerned with Regression Theory and a brief discussion of CR&T techniques for Data Mining is developed. CR&T enables to construct Answer Trees which provide an insight into the data in hand. This section [10.7] is a good introduction to this fashionable theme.

The last chapter is a good discussion of the different ways of tackling statistics and in taking into account some of the fallacies present in the more popular normal based inference models.

Finally the Appendixes provide key information for planning re-sampling experiments including some of the existent software sources of codes.

The book includes practical examples and exercises which may be implemented using computer programs as SAS, STATA and StatXact.

A Web site [<http://users.oco.net/drphilgood/resmp.htm>] provides some additional codes.

C. Bouza
Universidad de La Habana

Parametric Statistical Change Point Analysis

J. Chan and A.K. Gupta (2000)

Birkhäuser Verlag, 192 pages ISBN 3-8176-4169 ISBN 0-8176-4169-6 SPIN 10754114

This book aims to provide a thorough, comprehensive and actualized presentation of the general problem of determining the change points. It is intended as a book for specialists but it may be used as a text in advanced courses on statistics for engineering economists, biologists and geographers because of its connections with interesting problems which arise in Quality Control [in continuous production], in Geology, Environmentics and Marketing.

The first chapter provides a brief introduction.

The emphasis of Chapter 2 is the study of changes when the mean and [or] the variance are studied for an univariate normal variable. The Likelihood and the informational approaches were used for deriving different statistics. The more important of them is the Scharwz-Information-Criterium (SIC). Two examples illustrate the testing procedures based on SIC and tables with the needed critical values are given.

Most of the emphasis of Chapter 3 [Multivariate Normal Models] follows the same line of the previous one. It has 5 examples and 11 tables, some of them with critical values of the SIC obtained for this problem. Multiple Linear Regression is the them of Chapter 4 in which a Bayesian point of view is introduced. Unfortunately only one example is discussed.

The final three chapters of the book deal with non-normal distributions: Gamma, Exponential and Discrete models. In each of them an example is de developed and discussed. 102 references are listed.

Mario Miguel Ojeda Ramírez
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Continuous Time Markov Chains and Applications.

A Singular Perturbation Approach

G.G. Yin and Q. Zhang (1998)

Springer Verlag xv+349

The main feature of this book is the treatment of the non-stationary chains. This theme is not seriously studied in the generality of specialized books. This books gives an account of singular perturbations in Markovian Systems within an integrated framework. The relation between singular perturbed markovian systems and stochastic processes are clearly set up.

The book is of interest for applied mathematicians, physics as well as for some specialists from optimization or engineering.

A. Shang
Smith and King College

The Statistical Mechanics of Financial Markets

J. Wit (2001)

Springer Verlag xii+220

This book has 9 chapters. The first in an introduction to the contents and the second an introduction for beginners (forwards, futures, options, price mechanisms). The third chapter presents the Bachelier's demonstration. Chapter four gives the derivations of the pricing. Chapter five is devoted to establish how to use empirical information for supporting (or not) geometrical assumptions. Chapter six develops the aspects of the dynamics of the exchange (foreign) markets presented in the previous chapter. The risk problem (volatility, value-at-risk) is the theme of chapter seven together with some related optimal problems. Chapter eight deals with simulation models and their role in organizing exchanges markets. Finally in Chapter nine the relation between natural phenomena and finance problems are discussed. The discussion of the importance of the statistical characterization of some financial data through correlation, the distributions as well as the use of prediction models for market evolution, signal detection of exchange crashes are remarkable.

J. Roush
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Basic Statistical Methods and Models for the Sciences

J. Rosenblatt (2002)

Chapman and Hall/CRC xii+296

ISBN 1-58488-147X

This book can be used in course for non mathematicians. It introduces the basic ideas that are behind the methods with clarity and almost without using mathematics. It is maintained at the very elemental level expected from students of the soft-science. The author goes through the essentials of the methods. The computation is made using MINITAB.

It is recommended for courses for in social sciences and in introductory one semester courses in some engineering or science specialties.

Y. Shoo

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