RESEÑAS / BOOK REVIEWS

Financial econometrics:
Problems, Models and Methods
C. Goueéroux and J. Jassiak (2001)
Princeton University Press ISBN 0691088721
Xi+513 $65.00

Econometric progresses through applications. Its use in finance is rather young. This book was written aiming to be a text for teaching a course in Econometry for finances at the university level. It has 16 chapters. The first 3 chapters present basic statistical models of Econometry. They contain an exposition of the more used of the existent models for univariate time series, Box-Jenkins methods for correlograms, estimation in standard stationary processes, diagnostic checking, multivariate analysis, temporal dependence as well as the role of the interactions. The next 5 chapters discuss financial theoretical models such as dynamic relations, cointegration, ARCH models, forecasting procedures under dynamic schemes and capital asset pricing models. Chapters 9 and 10 return to the statistical modeling problematic but close to concrete financial problems. We encounter in them discussions on themes as multiple time series with returns whose dynamic is expressed by common factors, Kalman filtering, Kitagawa filter, qualitative separation in finite data analysis, Markov chains applications, stationary conditions, spectral decomposition. The group set by the chapters 11-13 presents continuous time models and derivation assets (Blackscholes formula, Geometric Brownian motion. Orstein-Uhlenbech processes, Euler discretization, Binomial trees. Derivative prices determination, statistics for diffusion processes and for incomplete markets, etc). The book ends with 3 more chapters where the authors discuss high frequency data analysis, risk managerial and related issues.

I think that it contains enough material for a two-semester course for Mathematicians going into finance or Ph.D. courses or economists.

Malini M. Dutta
Smith and King College

Risk Modeling for determining Value
and Decision Making
G. Koller (2000)
Chapman and Hall/ CRC. ISBN: 1-58488-167-4
Xiv+321 $49.95

The book has 18 chapters. The first eleven are devoted to the presentation of examples of risk modeling. If we consider them as 'Part 1' the second part is formed by chapters 12-18. The author presents, basically the contents of a previous book of his authorship (Risk Assessment and Decision Making in Business and Industry, 1999). The first part permits to obtain knowledge on the problem and its challenges in practice. It is a good lecture for the non-initiated and a reference source for initiated. The formers will get at home, with the particularities of management or of the theoretical models-software use problematic. The others will have a good reference manual. The main point of the book is how to deal with risky decisions in business. Then it is intended for an auditory composed mainly by managers. They should be aware of how risky may be certain behaviors and that mathematical models may deal with the look for appropriately not so costly decisions, avoiding to say 'optimal'. The mathematicians, think in statisticians and operations researchers, will not learn nothing on how to model but to notice which problems arise and which models in their bag are adequate. Nobody will learn to model with this book. It is not the author's intention.

A large percent of the chapters includes a computer support for the practical day to day deal with risky decisions. Each chapter closes with a summarization of the contents emphasizing the implications.

I recommend it for people involved with management including the mathematicians and engineers that have the technical responsibility in designing models for dealing with decision making in risky environments.

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

Six Sigma: The Breakthrough Management Strategy Revolutionizing the World's top corporations

M. Harris and R. Schröeder (2000)
Currency/Doubleday   ISBN 0-385-49437-8
Xii+301 $27.50

This is a valuable book for every body involved with Quality control. It poses an emphasis in the business points of view, which is good for fitting the minds of scientists and engineers within the macro real world of financial and accounting. The first author is one of the gurus of the 6-sigma movement for ensuring high quality control standards. They describe several important real-economy problems in top business firms. They point out the importance of merging statistical thinking and management. The weakness of statisticians with their model minded behavior, conspires against immediate problem solving. The main attitudes are described and criticized. Similarly the consequences of being a manager with a solve-now behavior, say without and strategic thinking, is questioned and the effect of making decision in a risky market is established and exemplified. The communication inter-phase manager-statistician is analyzed in deep and the mutual shortages are discussed. All this discussion are made maintaining the mathematics at a minimum level. The discussion of the examples is very illustrative both for managers and scientists.

It is a need-to-have book for everyone involved with QC.

M.K. Phillips
Bhat & Sarkar Consultors

Root Cause Analysis

B. Andersen and T. Fagerhaug (2000)
ASQ Quality Press   ISBN 0-87389-0
X+155 $30.00

The authors stress that a lot of managers and businessmen face problems that they may be needing of more professional skills for going farther than the popular 6-sigma quality control behavior. They should try to get the 'root causes' of the observed phenomena. If they want to do so, more sophisticated tools are needed for this task. This book does not give a deep discussion of the techniques to be used but on 'how and when to use them'. As the basic audience of the book is the managerial population that was expected. Simple but suggesting examples are given. They should make the manager aware of the risks of not being 'strategically minded'. That is crucial for having a mathematical friendly manager who, wanting to optimize their operations, consults an skillful professional. If everything works optimally in his mind, he/she will look for a long term contract with a specialist in Operations Research.

I recommend the book for the library of an Operations Research Department as well as for the manager's shelf case.

Dilip.C. Perves
Bhat & Sarkar Consultors

Applied Multivariate Analysis

N. H. Tim (2002)
Springer Verlag   ISBN 0-387-95347-7
xxiv-693 $89.95

This book should be considered as an alternative to Johnson & Wickern's book 'Applied Multivariate Statistical Analysis'. As it, this book is some kind of encyclopedia for the mathematical treatment of multivariate data. The reader should have a solid background in Matrix Algebra though the basics of it is, in any way, given in this book. Theorems are given without proofs. The contents are: Multivariate Distributions,

Multivariate Regression Analysis, Random and Mixed Models, Discrimination, Classification Analysis, Principal Components, Factor Analysis and Clustering. Each chapter has a set of problems of practical interest and gives tips for obtaining data sets in the web to be worked with SAS, the recommended statistical package.

I missed a good treatment of how to deal with missing data.

It is a good book for the library of Mathematical Statistics Departments

Biswadandu K. Gupta
Smith & King College

The design and Analysis of Computer Experiments
T.J. Sandner, B.J. Williams and W.I. Kotz (2003)
Springer Verlag   ISBN 0-387-95420-1
Xii+283 $69.95

Anyone who has been involved in preparing a course in theoretical statistics will welcome the existence of a book as this in his shelf. It presents a series of topics that usually take place in the discussion through these courses and that, form time to time, requires of some special pedagogical touch for linking the rigorousness of mathematical theory with the applicability of the supported techniques. The topics treated may be described as Gaussian random functions, correlation, prediction and design of experiments. Non Gaussian problems are not considered at all. They develop an exposition on unbiasedness, maximum likelihood and cross validation. The framework of prediction is used for developing it. Two chapters are used for developing this topic. The technicalities of the Design of Experiments are presented with the usual look but with a sense of predictability. A large list of references is provided.

This book would serve as a basis for a course at a Ph.D. level as well as for good reference source for supporting advanced courses in graduate studies in Mathematical Statistics. Unfortunately it is not accompanied by an adequate set of exercises.

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

Applied Longitudinal Data Analysis for Epidemiology
J.W.R. Twisk (2003)
Cambridge University Press   ISBN 0-521-81976
Viii+295 $95.00

The stated aim of this book is to make the art of analyzing longitudinal data accessible to a larger audience than the usual of specialized bio-statisticians. In this, it is highly successful. It consists of 13 chapters. The first chapter is merely introductory and the next one emphasizes on the art of designing a longitudinal study. In the next two chapters the author packages the analysis of continuous outcomes and the possible relationships. Chapter six does a similar presentation for dichotomous variables, chapter seven with categorical and count variables while chapter in the fifth is motivated the need of using the previously discussed models. Chapter eight address models for analyzing two measurements longitudinal studies. Chapter nine deals with theoretical and practical aspects of the analysis of the experiments, chapter ten with the missing data problematic and chapter eleven with tracking. The book ends with the discussion on the existent software and its characteristics (Chapter twelve) and with sample size determination (Chapter thirteen). One plus point about the book is that plenty examples are given.

Kalaish C. Barana
Bhat & Sarkar Consultors

Data Analysis and Graphics Using R:
An Example Based Approach
J. Maindonald and J. Braun (2003)
Cambridge University Press   ISBN 0-521-81336-0
Xii+361 $65.00

This book sustains the use of the R-system for elaborating a deep analysis of large databases. This is interesting for the potential users: statisticians, operations researchers, engineers and software specialists. It has 12 chapters. An introduction is given through the first 3 chapters (the R-language, statistical analysis,

sub-routines and modeling, etc. using R). The fourth goes into inferential models starting with confidence interval estimation and going to the use of re-sampling procedures. Regression is treated in chapters 5 and 6. Along with some disquisitions on the Linear Model a discussion is made on how R permits to exploit its structure. The next 4 chapters go around derivations of related models such as GLIM, Multilevel models and Time Series. They also discuss the R-treatment of computer-based models as Tree based classification and regression (C&RT) and multivariate data analysis. The closing chapter is devoted to recommend an extense bibliography and to present a series of examples. A library of codes written in R is given together with a list of the functions.

The book is well designed for ease use. It is recommendable for the library of the Statistical Department as well as for the Computer Science Department.

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

Bioinformatics: The Machine Learning Approach
P. Baldi and S. Bronack (2001)
MIT Press   ISBN 0-262-02506
Xxii+458   £36.95.

I guess that bio-informatic's evolution is basically connected with mammoth data sets. Only the existence of high-speed computer machines allowed the practical development of it. A solution for the investigator is to assign to the machines also the role of 'learning' and to give him incomplete and sometimes somewhat unnatural ideas, of what is going on. A related field is Data Mining. The specialists expect that the machine will learn and that its output will give them a path for looking for the truth, dealing only with small and manageable number of options. This book intends to present an up-to the present state of the art on machine learning. That is, its main objective is to consider problems of learning through the use of machine algorithms. A starting point of the authors is that we can develop our research using as touchstone Markov Models, Neural Networks and a Bayesian Inferential point of view.

This is a second edition of the popular first one. It has been enlarged for coping with the gap generated by the fast development of the subject.

The first chapter introduces the reader into the nature of biological data (genes, proteins, etc). The following two chapters cope with the probabilistic framework of machine learning. The fourth chapter is devoted to give an overall view of Machine Learning algorithms. Then, with an adequate theoretical support chapters 5 and 6 discuss at deep Neural Networks, the following two Hidden Markov Models, chapter 9 the use of graphical methods and chapter 10 introduces us into the exciting world of Phylogenetic Trees. Chapter 11 is devoted to the technicalities of Structured Grammars and Linguistics and the next chapter to Deoxyribonucleic Acid Mechanisms and Gene Expansions. The last chapter gives an account of databases and resources available in Internet. A large list of references is given.

Ishart M. Shah
Institute of Computer Engineering and Business Management.

NEWS / ANUNCIOS

CONFERENCE AND PLACE/CONFERENCIA Y LUGAR	DATE AND CONTACTS/FECHA Y CONTACTOS
Workshops at the Research Institute for Mathematical Sciences Algebra, Languages and Computation Miyama, Funabashi-Shi, Chiba, Japan	February 21-23, 2005. www.kurims.kyoto.u.ac.jp
6th International Workshop on Operations Research Theme: Applications in Logistic Havana, Cuba.	March 7-11, 2005 guddat@mathematik.hu-berlin.de; sira@matcom.uh.cu;daduna@fhw-berlin.de
International Network Optimization Conference Lisboa, Portugal	March 20- 23, 2005 [http://www.inoc2005.fc.ul.pt/]
5th European Conference on Evolutionary Computation in Combinatorial Lausanne, Switzerland	March 30-- April 1, 2005 [http://evonet.lri.fr//eurogp2005/
14th Young or Conference University of Bath, Uk	April 4- 6, 2005. http://www.orsoc.org.uk/conf/yor14/

55th 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

2005 Informs Conference on Or/Ms Practice: Applying Science To The Art of Business Palm Springs, Ca	April 17- 19, 2005. [http://www.informs.org/conf/practice05
Fifth Siam International Conference on Data Mining Newport Beach, Ca, Usa	April 20- 23, 2005, [Http://Www.Siam.Org/Meetings/Sdm05/Index. Htm
Eighth Siam Conference on Optimization Stockholm, Sweden	May 15-18, 2005. [Http://Www.Siam.Org/Meetings/Op05/
Siam Conference on Applications of Dynamical Systems Snowbird, Utah	May 22- 26, 2005, [Http://Www.Siam.Org/Meetings/Ds05/Index.Htm
Eleventh Conference on Integer Programming and Combinatorial Optimization (Ipco Xi) Berlin, Germany	June 8- 10, 2005. [Http://Www.Math.Tu-Berlin.De/Ipco05
Siam Conference on Mathematical and Computational Issues in the Geosciences Avignon, France	June 13- 16, 2005. [Http://Www.Siam.Org/Meetings/Gs05/Index.Ht m]
31st International Workshop on Graph-Theoretic Concepts in Computer Science (Wg 2005) Metz, France	June 23- 25, 2005. [Http://Lita.Sciences.Univ-Metz.Fr/~Wg2005/]

4th Global Conference on Business & Economics Oxford University, Oxford, Uk	June 26- 28, 2005. [Http://Www.Kellogg.Northwestern.Edu/Msom2005/Index.Htm
Annual Meeting of the Statistical Society of Canada Saskatoon, Sasketchewan, Canada	Sometime in the summer of 2005 Www.Ssc.Ca
7th International Conference on Operations Research Havana, Cuba.	Sometime in March, 2006 guddat@mathematik.hu-berlin.de; sira@matcom.uh.cu;lromarin@imd.uned.es
International Conference on the Teaching Statistics (Icots-7) Bahia, Brazil,	July 2-7, 2006 Http://Www.Stat.Auckland.Ac.Nz/~Iase/Temp/Icots7callforpapers.Pdf
Informs Applied Probability Conference the Westin Ottawa, Ottawa, Ontario Canada	July 3- 8, 2005. [Http://Ifacplaza.Certicon.Cz/Index.Php]
Siam Annual Meeting New Orleans, La, Usa	July 11- 15, 2005. [Http://Www.Siam.Org/Meetings/An05/Index.Htm]
The 17th Imacs World Congress Paris, France	July 11- 15, 2005. [Http://Imacs2005.Ec-Lille.Fr/]
17th Triennial Conference of the International Federation of Operational Research Societies 2005 Honolulu, Hawaii	July 11-15, 2005. [Http://Www.Informs.Org/Conf/Ifors2005/]
22nd IFIP TC7 Conference on System Modeling and Optimization Special Session of The Working Group 7.7 **Stochastic Optimization Methods in Engineering and Finance** Turin, Italy,	July 18-22, 2005, Ifip2005@Polito.It
VI Brazilian Workshop on Continuous Optimization Goiania-Goias, Brazil,	July 18-22, 2005 Catholic University of Goias, Federal University of Goias Orizon@Mat.Ufg.Br <Orizon@Mat.Ufg.Br>
Informs Annual Teaching of Management Science Workshop Lake Bluff, Illinois	July 28- 31, 2005. [Http://Www.Informs.Org/Edu/Tmsworkshop/Tms05/Index.Htm]
Conference on Mulcriteria Decision Making Chania, Greece	Sometime in The Summer 2006
IAOS Conference 2006 Amman, Jordan	Sometime in The Spring or Sumer 2006 Http:/Www.Singstat.Gov.Sg/Iaos/Index.Html
2007 Joint Statistical Meetings Salt Lake City, Utah. To be Held at The Salt Palace Convention Center	July 29 - August 2, 2007 Meetings@Amstat.Org
2009 Joint Statistical Meetings Washington, Dc. To be Held at The Washington Convention Center.	August 2-6, 2009 Meetings@Amstat.Org
2008 Joint Statistical Meetings Denver, Colorado. To be Held at The Denver Convention Center.	August 3-7, 2008 Meetings@Amstat.Org
2006 Joint Statistical Meetings Seattle, Washington. To be Held at The Seattle Convention Center.	August 6-10, 2006 Meetings@Amstat.Org

6th Metaheuristics International Conference (Mic2005) Vienna, Austria	August 22- 26, 2005. [Http://Www.Mic2005.Org/]
Operations Research 2005 (Or 2005) International Conference on Operations Research Bremen, Germany	September 7- 9, 2005. [Http://Www.Or2005.Uni-Bremen.De]
Informs Annual Meeting, New Orleans 2005 New Orleans, Louisiana	November 13- 16, 2005 [Http://Www.Informs.Org/Conf/No2005/]
Informs Simulation Conference **Winter Simulation Conference 2005** Orlando, Fl. Usa	December 4- 7, 2005
Informs Annual Meeting 2006 Pittsburgh, Pa, Usa	November 5-8, 2006
Informs Annual Meeting 2006 Seattle, Wa, Usa	November 4- 7, 2007