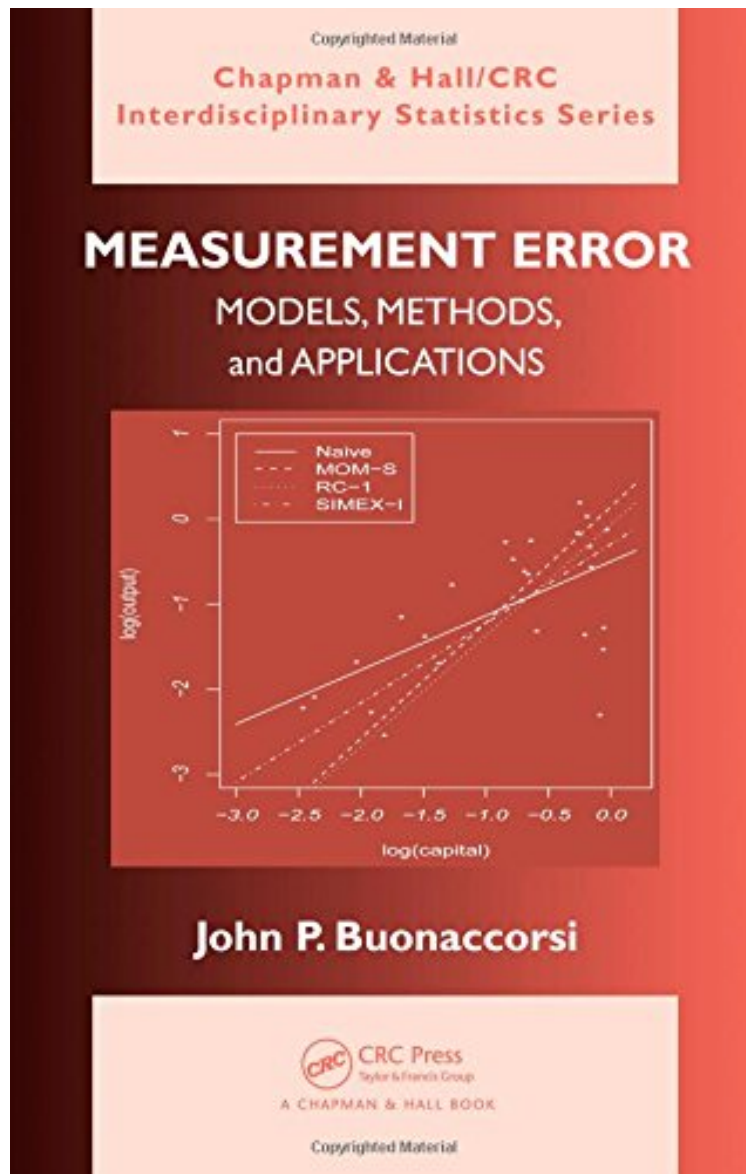


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Measurement Error: Models, Methods, and Applications (Chapman Hall/CRC Interdisciplinary Statistics)

John P. Buonaccorsi

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John P. Buonaccorsi : Measurement Error: Models, Methods, and Applications (Chapman Hall/CRC Interdisciplinary Statistics) before purchasing it in order to gage whether or not it would be worth my time, and all praised Measurement Error: Models, Methods, and Applications (Chapman Hall/CRC Interdisciplinary Statistics):

1 of 1 people found the following review helpful. Excellent resource!By Bayesian freakThis book explains the ideas very clearly and also provides the mathematical details needed to fully understand the models. The book has plenty of examples and covers many situations where measurement error could be accounted for. It would be very valuable as a textbook or as a reference for the practitioner.0 of 0 people found the following review helpful. Excellent TreatmentBy Economic AnalystExtraordinarily clear explication of a difficult and often ignored topic.

Over the last 20 years, comprehensive strategies for treating measurement error in complex models and accounting for the use of extra data to estimate measurement error parameters have emerged. Focusing on both established and novel approaches, *Measurement Error: Models, Methods, and Applications* provides an overview of the main techniques and illustrates their application in various models. It describes the impacts of measurement errors on naive analyses that ignore them and presents ways to correct for them across a variety of statistical models, from simple one-sample problems to regression models to more complex mixed and time series models. The book covers correction methods based on known measurement error parameters, replication, internal or external validation data, and, for some models, instrumental variables. It emphasizes the use of several relatively simple methods, moment corrections, regression calibration, simulation extrapolation (SIMEX), modified estimating equation methods, and likelihood techniques. The author uses SAS-IML and Stata to implement many of the techniques in the examples. Accessible to a broad audience, this book explains how to model measurement error, the effects of ignoring it, and how to correct for it. More applied than most books on measurement error, it describes basic models and methods, their uses in a range of application areas, and the associated terminology.

The author has written a praiseworthy summary of available results on measurement errors in a wide variety of statistical models. The author also covers results described in very recent papers, which have not been previously published in any other book. The book brings a big help for theoretical researchers as well as applied statisticians who deal with data contaminated by measurement errors. The author demonstrates a very deep understanding for the theory and does not hesitate to discuss many specific theoretical problems. He succeeds very well in illustrating the methods on real examples and explaining the ideas to applied statisticians. Although not primarily intended for biostatisticians, I would say the book is suitable exactly for epidemiological and biostatistical applications. very clearly and systematically organized. the book offers an excellent and remarkable overview of available methods for incorporating measurement errors to statistical analysis. Jan Kalina, *ISCB News*, 52, December 2011 we think Buonaccorsi's book would be a great textbook The book also contains many interesting data examples, which are useful for those concerned with applications. Overall, the book is also a good reference resource We would recommend this book to people who are interested in statistical methods for measurement error. C.Y. Wang and X. Song, *The American Statistician*, August 2011 This book is a successful attempt to collect, organize and present the literature over the newly developed and earlier existing topics of measurement error models in one place. The material that is presented in chapters [11 and 12] is, to my knowledge, not available in any other book on this area. This book should be of immense help to those who are interested in the theoretical as well as applied aspects of measurement error models. Some topics in the book may be used to teach advanced graduate courses. The book is overall well written, presents updated developments in the area of measurement error models and is an excellent guide to applications. I am sure that it will stimulate researchers in and newcomers to this area. *Journal of the Royal Statistical Society, Series A*, April 2011 There are plenty of illustrations and worked examples throughout The book is very readable and clearly demonstrates the importance of recognizing measurement error, which is often ignored as a bit of a nuisance to be swept under the carpet. Together with easily accessible software, in the future, the problem is likely to be more commonly addressed and dealt with properly. *International Statistical* (2010), 78, 3 About the Author John P. Buonaccorsi is a professor in the Department of Mathematics and Statistics at the University of Massachusetts, Amherst.