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Mathematical Statistics: Basic Ideas and Selected Topics, Volume I, Second Edition: Volume 2 (Chapman Hall/CRC Texts in Statistical Science)

Peter J. Bickel, Kjell A. Doksum
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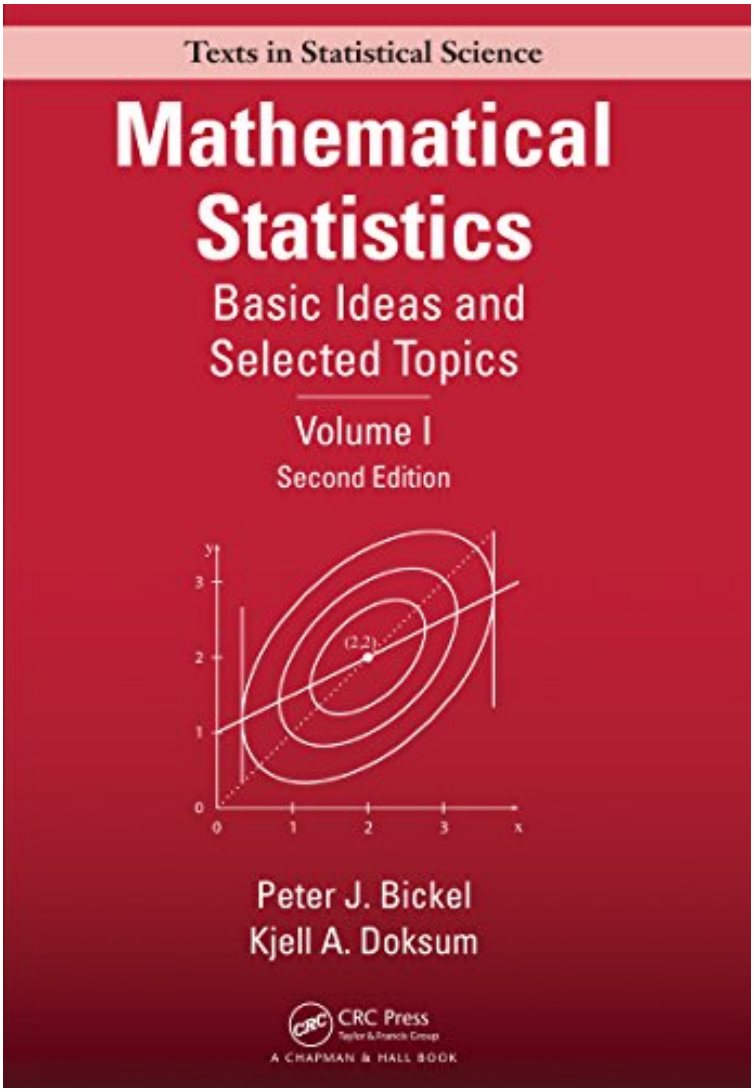

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Peter J. Bickel, Kjell A. Doksum : Mathematical Statistics: Basic Ideas and Selected Topics, Volume I, Second Edition: Volume 2 (Chapman Hall/CRC Texts in Statistical Science) before purchasing it in order to gage whether or not it would be worth my time, and all praised Mathematical Statistics: Basic Ideas and Selected Topics, Volume I, Second Edition: Volume 2 (Chapman Hall/CRC Texts in Statistical Science):

24 of 26 people found the following review helpful. Great! ...but some background necessaryBy DavidTerse, but in the best way possible. Mathematical Statistics (MS) is for those who already have a firm introduction to probability and some work in statistics. Any rigorous mathematical background (especially in analysis) is definitely a bonus, which is the level this text is written at.I haven't read all of MS (there's A LOT of material here) but I have gone through all of chapter 1 (took 5 weeks to cover in the course that used this text), and then bits and pieces through chapter 4. That is, I took a course that used this book and we covered all of the first chapter plus bits and pieces of chapters 2-4 over 10 weeks. At first when I started reading this book, I wasn't impressed. However, the more I read, the more patient I became with the text due to the insights it provided -- after chapter one, the pieces start falling together. This isn't just some statistics book to get the reader to understand what a maximum likelihood estimate or the information inequality is -- MS is about tying together concepts and, specifically, relating these concepts to exponential families (not to be confused with an exponential distribution, which is one type of exponential family).Exponential families are emphasized in this book and were something I had never heard of prior to reading this book (exponential, beta, and normal distributions are all examples of exponential families). The exposure to the properties, Theorems, and the propositions of these families that make them unique has brought my understanding of these concepts and their implementation to an entirely new level. This is a theory book, but with theory comes application, and the problems (some extremely difficult) help make this expansion to application.Having mentioned just a fraction of what this book is about, now I have to be real. This book is hard. I was a math major (now a stats grad student) with a good grounding in statistical concepts and this book is hard. Many people will not like this book, but for those who are willing to commit a lot of time to learning statistical background and theory should find this book a treasure. I cannot emphasize enough that this book is certainly slower reading than the average statistics book. I would give it a 2:1 or 3:1 ratio in required reading time to the average texts -- this book is just not the average. With all this said, my opinion of this book certainly differs from others who also took the course but had a less rigorous mathematical background or had less prior knowledge about some of the statistical concepts.A good complementary text is Probability and Statistics (PS), by DeGroot, which gives basics about many of the topics expanded on in Mathematical Statistics. About 5-6 people in my class ended up buying PS to supplement MS, and all those I talked to agreed PS was better for introducing topics. For a truly ambitious individual, self-study would be possible but difficult with this book (complement MS with PS if there are difficulties in self-study).1 of 1 people found the following review helpful. My most favorite statistics bookBy Fei Y. ZhuThis is an excellent statistics book. It tries to teach statistical concepts without using too much math. It takes a lot of time and efforts to read the book and understand the concept. But it is well worth the time and efforts. I love this book!0 of 0 people found the following review helpful. MehBy F.F.This was a supplementary text for a graduate course, and I barely used it.

Mathematical Statistics: Basic Ideas and Selected Topics, Volume I, Second Edition presents fundamental, classical statistical concepts at the doctorate level. It covers estimation, prediction, testing, confidence sets, Bayesian analysis, and the general approach of decision theory. This edition gives careful proofs of major results and explains how the theory sheds light on the properties of practical methods. The book first discusses non- and semiparametric models before covering parameters and parametric models. It then offers a detailed treatment of maximum likelihood estimates (MLEs) and examines the theory of testing and confidence regions, including optimality theory for estimation and elementary robustness considerations. It next presents basic asymptotic approximations with one-dimensional parameter models as examples. The book also describes inference in multivariate (multiparameter) models, exploring asymptotic normality and optimality of MLEs, Wald and Rao statistics, generalized linear models, and more.Mathematical Statistics: Basic Ideas and Selected Topics, Volume II will be published in 2015. It will present important statistical concepts, methods, and tools not covered in Volume I.

nbsp;"These methods are clearly explained by two outstanding statistical practitioners. hellip; This book is well supported by the references, increasing its value as a guide through the often difficult world of mathematical statistics. hellip;the authors consider key topics which include asymptotic efficiency in semiparametric models, semiparametric maximum likelihood estimation, proportional hazards regression models and Markov chain Monte Carlo methods."? Receptos Pharmaceuticals, San Diego, 2016About the AuthorPeter J. Bickel is a professor emeritus in the Department of Statistics and a professor in the Graduate School at the University of California, Berkeley. Dr. Bickel is a member of the American Academy of Arts and Sciences and the National Academy of Sciences. He has been a Guggenheim Fellow and MacArthur Fellow, a recipient of the COPSS Presidentsrsquo; Award, and president of the Bernoulli Society and the Institute of Mathematical Statistics. He holds honorary doctorate degrees from the Hebrew University of Jerusalem and ETH Zurich. Kjell A. Doksum is a senior scientist in the Department of Statistics at the University of Wisconsinndash;Madison. His research encompasses the estimation of nonparametric regression and correlation curves, inference for global measures of association in semiparametric and nonparametric settings, the estimation of regression quantiles, statistical modeling and analysis of HIV data, the analysis of financial data, and Bayesian

nonparametric inference.