Statistics in Human Genetics and Molecular Biology (Chapman Hall/CRC Texts in Statistical Science)

Cavan Reilly
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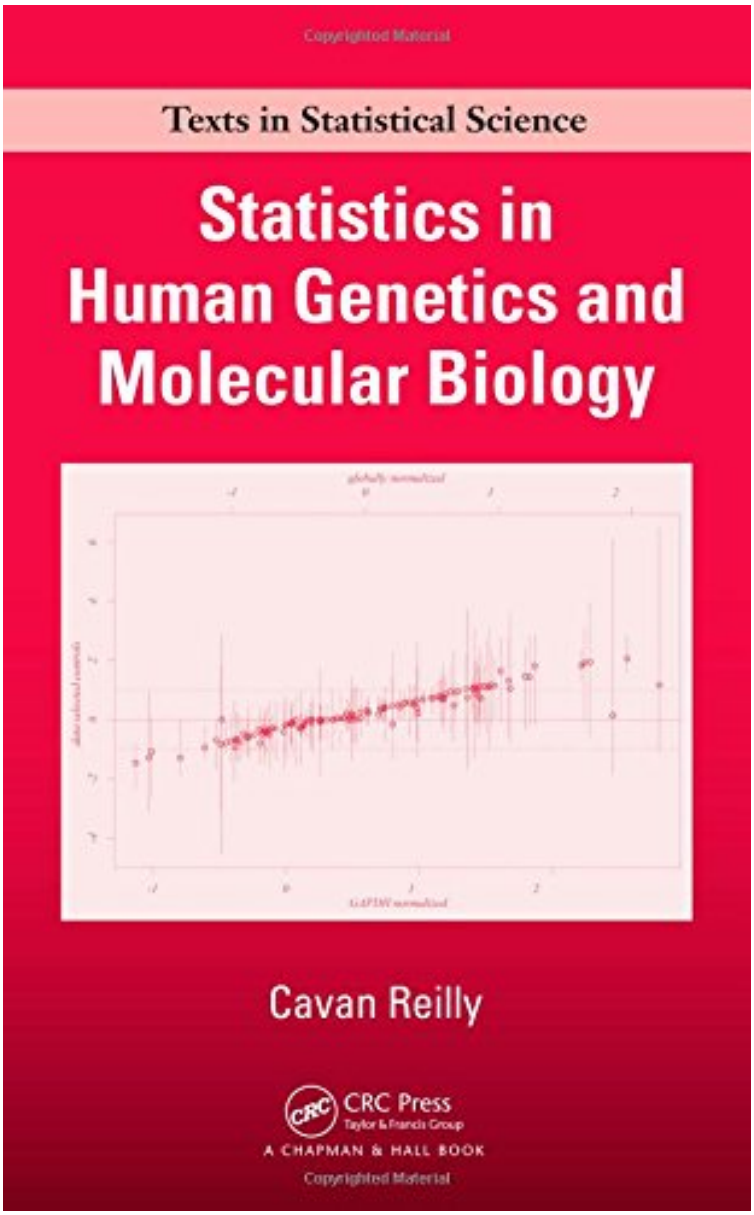

#3913972 in Books Chapman and Hall/CRC 2009-06-19Original language:EnglishPDF # 1 9.30 x .80 x 6.30l, 1.20 #File Name: 1420072633280 pages | File size: 69.Mb

Cavan Reilly : Statistics in Human Genetics and Molecular Biology (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 Statistics in Human Genetics and Molecular Biology (Chapman Hall/CRC Texts in Statistical Science):

1 of 5 people found the following review helpful. Cannot read on ipadBy R. FrankI'm giving the publisher a 1 star review because for whatever lawyerly reason I was able to purchase this on my iPad but cannot read it there. This is insane. Publisher, tell your lawyers to take a long lunch and lighten up.5 of 5 people found the following review helpful. Looking for what DNA does.By John MatlockAimed at the beginning graduate student in statistics, biostatistics, computer science, and related fields in applied mathematics this book is positioned at an interesting place. It presumes that the student has had a good grounding in linear algebra and basic calculus along with some study of general statistics where calculus is used. It then presents a graduate level course in statistics, but specialized in those statistical procedures which have proven useful in the biological sciences.As such the book spends time on just those techniques rather than being a general course in statistics. The unifying theme revolves around the basic questions: What does this segment of DNA do and which segment of DNA does that.Along the way the book gives the student some background in biology, computer science, statistics and bioinformatics that enables him to understand just what it is that he is trying to accomplish and that subsequently he can use this knowledge when facing actual problems found in research.

Focusing on the roles of different segments of DNA, Statistics in Human Genetics and Molecular Biology provides a basic understanding of problems arising in the analysis of genetics and genomics. It presents statistical applications in genetic mapping, DNA/protein sequence alignment, and analyses of gene expression data from microarray experiments. The text introduces a diverse set of problems and a number of approaches that have been used to address these problems. It discusses basic molecular biology and likelihood-based statistics, along with physical mapping, markers, linkage analysis, parametric and nonparametric linkage, sequence alignment, and feature recognition. The text illustrates the use of methods that are widespread among researchers who analyze genomic data, such as hidden Markov models and the extreme value distribution. It also covers differential gene expression detection as well as classification and cluster analysis using gene expression data sets. Ideal for graduate students in statistics, biostatistics, computer science, and related fields in applied mathematics, this text presents various approaches to help students solve problems at the interface of these areas.

Thankfully, some brave souls are willing to serve as guides to rigorous application and understanding of statistical approaches to genetically informative data. Cavan Reilly is among them. The book is self-contained and well organized, covering a substantial breadth of the core topics in genetics and genomics. this book is a valuable reference source for both statistics-oriented and human-genetics-oriented researchers and graduate students to learn the specialized methodology for analysis of diverse genetic data. a useful textbook for beginners trained in applied mathematics and statistics to take in a panoramic snapshot of the very evolving field of statistical genetics and genomics.Xiang-Yang Lou and David B. Allison, Biometrics, December 2011 Very useful for those taking courses in statistics and geneticists.Pediatric Endocrinology s, Vol. 7, No. 4, June 2010About the AuthorCavan Reilly is associate professor of biostatistics at the University of Minnesota.