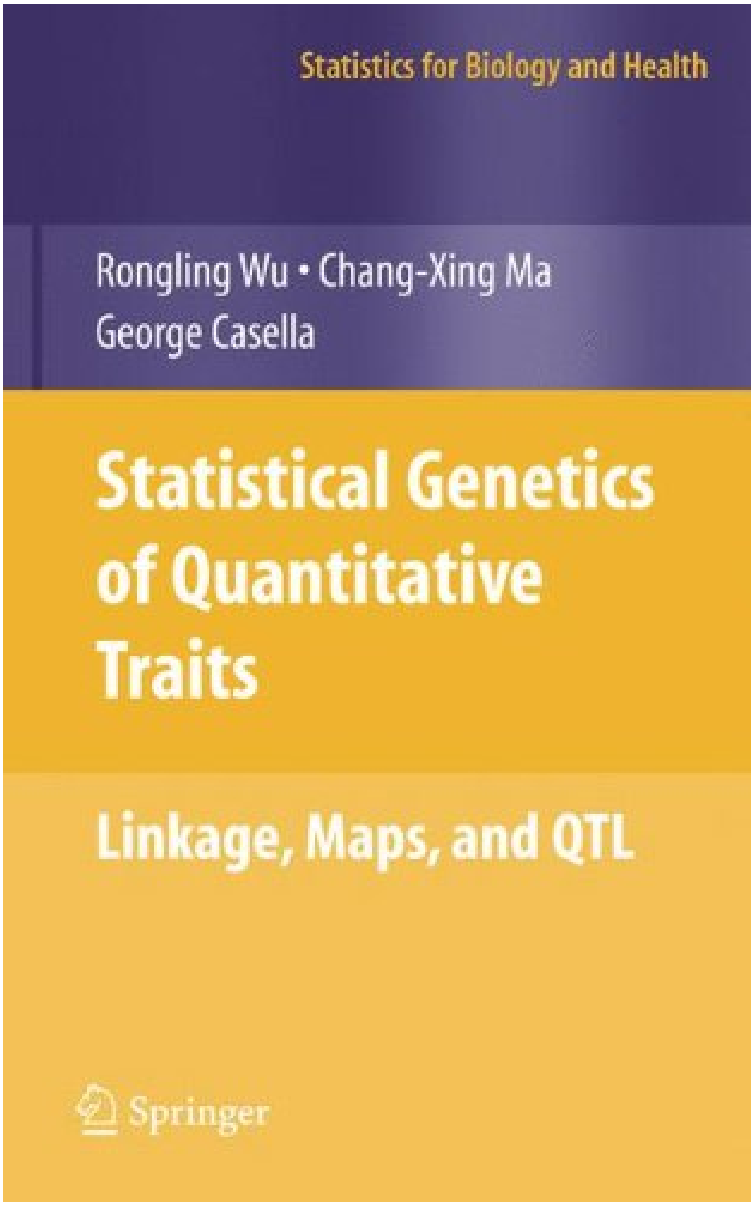
Statistical Genetics of Quantitative Traits: Linkage, Maps and QTL (Statistics for Biology and Health)

Rongling Wu, Changxing Ma, George Casella



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Rongling Wu, Changxing Ma, George Casella : Statistical Genetics of Quantitative Traits: Linkage, Maps and QTL (Statistics for Biology and Health) before purchasing it in order to gage whether or not it would be worth my time, and all praised Statistical Genetics of Quantitative Traits: Linkage, Maps and QTL (Statistics for Biology and Health):

This book introduces the basic concepts and methods that are useful in the statistical analysis and modeling of the DNA-based marker and phenotypic data that arise in agriculture, forestry, experimental biology, and other fields. It concentrates on the linkage analysis of markers, map construction and quantitative trait locus (QTL) mapping, and assumes a background in regression analysis and maximum likelihood approaches. The strength of this book lies in the construction of general models and algorithms for linkage analysis, as well as in QTL mapping in any kind of crossed pedigrees initiated with inbred lines of crops.

From the Back CoverThe book introduces the basic concepts and methods that are useful in the statistical analysis and modeling of DNA-based marker and phenotypic data that arise in agriculture, forrestry, experimental biology, and other fields. It concentrates on the linkage analysis of markers, map construction and quantitative trait locus (QTL) mapping and assumes a background in regression analysis and maximum likelihood approaches. The strengths of this book lie in the construction of general models and algorithms for linkage analysis and QTL mapping in any kind of crossed pedigrees initiated with inbred lines of crops and plant and animal model systems or outbred lines in forest trees and wildlife species. The book includes a detailed description of each approach and the step-by-step demonstration of live-example analyses designed to explain the utilization and usefulness of statistical methods. The book also includes exercise sets and computer codes for all the analyses used. This book can serve as a textbook for graduates and senior undergraduates in genetics, agronomy, forest biology, plant breeding and animal sciences. It will also be useful to researchers and other professionals in the areas of statistics, biology and agriculture. Rongling Wu is Associate Professor of Statistics at the University of Florida, Gainesville. He currently serves as Associate Editor for six genetics and bioinformatics journals. Chang-Xing Ma is Assistant Professor of Biostatistics at the StateUniversity of New York at Buffalo. George Casella is Distinguished Professor of Statistics and Distinguished Member of the Genetics Instituteat the Univesity of Florida, Gainesville. He is a fellow of the American Statistical Association and the Institute of Mathematical Sciences, and the author of four other statistics books. From the s: "[I]t is a big help and guidance in the field of statistical developments for genetic mapping, synthesised all in one volume helping to build a bridge between genetics and statistics." (Lutz Bunger, Genetic Research, 89, 2007) "...[T]his is an ideal book for a young researcher looking for an exciting and developing field to get into." (International Statistics , April 2008)