Applied Spatial Statistics for Public Health Data

Lance A. Waller, Carol A. Gotway
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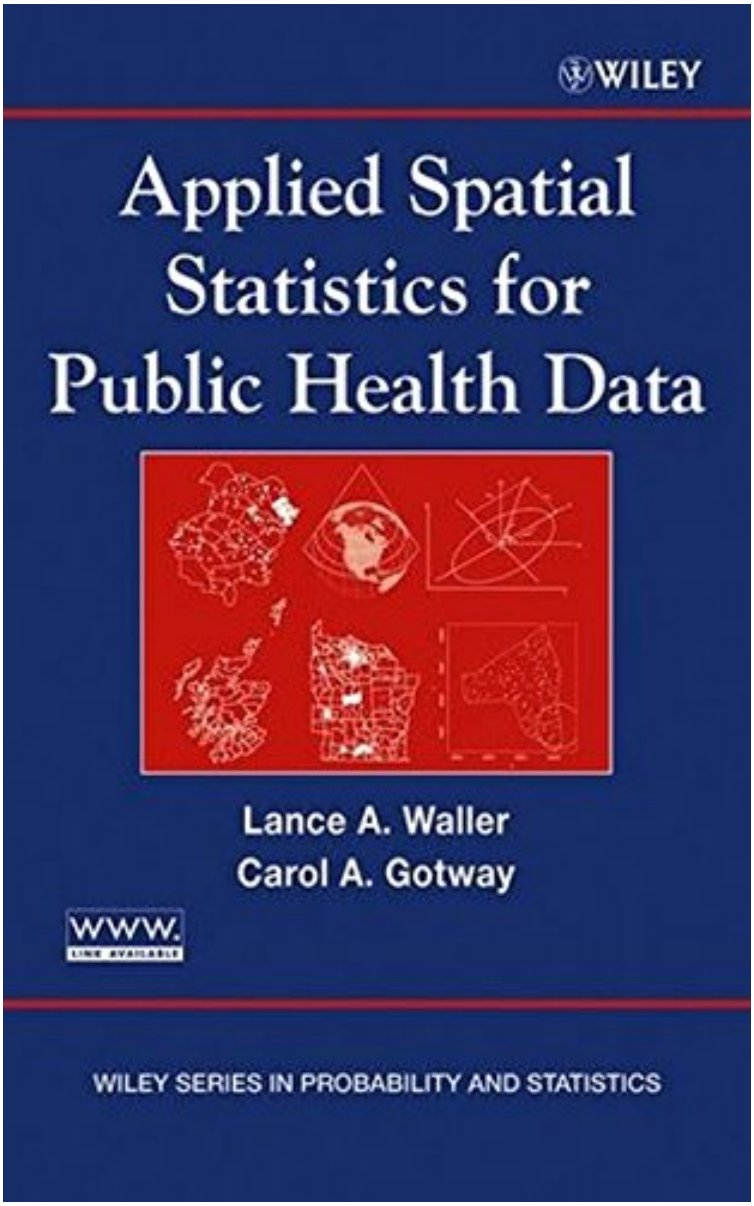

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Lance A. Waller, Carol A. Gotway : Applied Spatial Statistics for Public Health Data before purchasing it in order to gage whether or not it would be worth my time, and all praised Applied Spatial Statistics for Public Health Data:

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people found the following review helpful. Essential bookshelf materialBy Ben MadinThis book provides an excellent depth for most users, and manages to cover the material without getting too bogged down.Although it would be hard work for a beginner to either spatial data or epidemiology, I doubt they would be looking for such a book. It does however cover the topic range from the entry level up to the more complex topics, so makes an excellent text for graduate and postgraduate work.5 of 5 people found the following review helpful. Must be read... accompanied by some real spatial statistics bookBy MMRThis is the kind of good book that gives an overview of applications in spatial statistics. It obviously lacks - since it's not a math/stats book - theorems, proofs, and demonstrations, but it does have essential ideas and explores the subject in a very friendly language. If you are in social sciences, don't loose it. If you are in stats, buy some spatial statistics book (Cressie's, for example), and read them together.Chapter 2 has been written very carefully, and gives the reader important ideas about risk, rate estimation, and the different kinds of data result from different experimental designs. If you bought 'that' spatial stats book, don't bother about chapter 3.Chapter 4 gives (again) a very careful description, in this case about graphics and spatial data presentation. I'd say it does the job.From chapter 5 on, you'll need 'the other book' in order to understand what really is at stake.It could be a little less expensive...

An application-based introduction to the statistical analysis of spatially referenced health data Sparked by the growing interest in statistical methods for the analysis of spatially referenced data in the field of public health, Applied Spatial Statistics for Public Health Data fills the need for an introductory, application-oriented text on this timely subject. Written for practicing public health researchers as well as graduate students in related fields, the text provides a thorough introduction to basic concepts and methods in applied spatial statistics as well as a detailed treatment of some of the more recent methods in spatial statistics useful for public health studies that have not been previously covered elsewhere. Assuming minimal knowledge of spatial statistics, the authors provide important statistical approaches for assessing such questions as: Are newly occurring cases of a disease "clustered" in space? Do the cases cluster around suspected sources of increased risk, such as toxic waste sites or other environmental hazards? How do we take monitored pollution concentrations measured at specific locations and interpolate them to locations where no measurements were taken? How do we quantify associations between local disease rates and local exposures? After reviewing traditional statistical methods used in public health research, the text provides an overview of the basic features of spatial data, illustrates various geographic mapping and visualization tools, and describes the sources of publicly available spatial data that might be useful in public health applications.

"a fine textbook for a course on spatial statisticseasy to follow and agreeable to readan excellent introduction and overview" (Statistics in Medical Research, August 2006) "...will be a successful addition to existing literature and foster the application of spatial statistical methods to topics in epidemiology and public health." (Biometrics, December 2005) "an interesting and worthwhile read for all practitioners of spatial statistics." (Computers Geosciences, July 2005) "I am pleased to add it to my collection and feel sure that it will be widely read and appreciated." (Journal of the American Statistical Association, June 2005)From the Back CoverAn application-based introduction to the statistical analysis of spatially referenced health data Sparked by the growing interest in statistical methods for the analysis of spatially referenced data in the field of public health, Applied Spatial Statistics for Public Health Data fills the need for an introductory, application-oriented text on this timely subject. Written for practicing public health researchers as well as graduate students in related fields, the text provides a thorough introduction to basic concepts and methods in applied spatial statistics as well as a detailed treatment of some of the more recent methods in spatial statistics useful for public health studies that have not been previously covered elsewhere. Assuming minimal knowledge of spatial statistics, the authors provide important statistical approaches for assessing such questions as: Are newly occurring cases of a disease "clustered" in space? Do the cases cluster around suspected sources of increased risk, such as toxic waste sites or other environmental hazards? How do we take monitored pollution concentrations measured at specific locations and interpolate them to locations where no measurements were taken? How do we quantify associations between local disease rates and local exposures? After reviewing traditional statistical methods used in public health research, the text provides an overview of the basic features of spatial data, illustrates various geographic mapping and visualization tools, and describes the sources of publicly available spatial data that might be useful in public health applications. About the AuthorLANCE A. WALLER, PhD, is an associate professor in the Department of Biostatistics at Emory University in Atlanta, Georgia. He received his PhD in Operations Research in 1992 from Cornell University. Dr. Waller was named Student Government Professor of the Year in 2003 by the Rollins School of Public Health, Emory University, and is a Fellow of the American Statistical Association. CAROL A. GOTWAY, PhD, is a mathematical statistician for the National Center for Environmental Health and an adjunct associate professor in the Department of Biostatistics at Emory University. She received her PhD in Statistics from Iowa State University in 1989. Dr. Gotway was awarded a Distinguished Achievement Medal by the American Statistical Associations Section on Statistics and the Environment for her contributions to

environmental statistics and is also a Fellow of the American Statistical Association.