The Geographic Spread of Infectious Diseases: Models and Applications (Princeton Series in Theoretical and Computational Biology)

Lisa Sattenspiel
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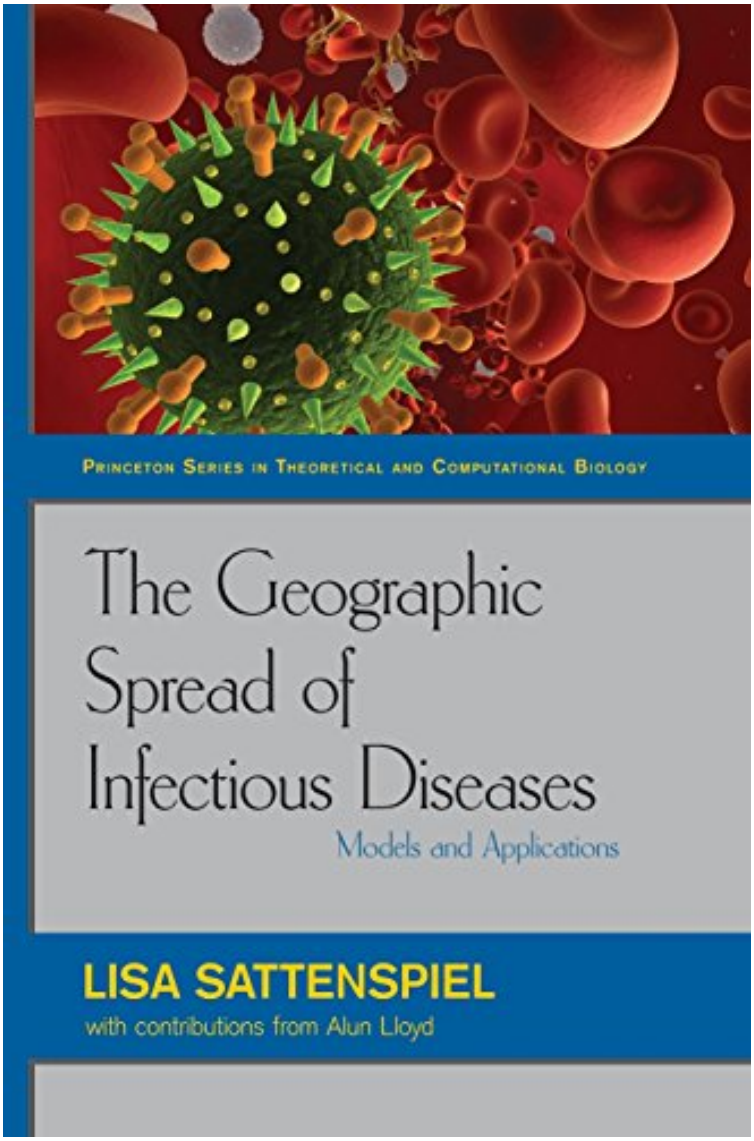

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Lisa Sattenspiel : The Geographic Spread of Infectious Diseases: Models and Applications (Princeton Series in Theoretical and Computational Biology) before purchasing it in order to gage whether or not it would be worth my time, and all praised The Geographic Spread of Infectious Diseases: Models and Applications (Princeton Series in

Theoretical and Computational Biology):

The 1918-19 influenza epidemic killed more than fifty million people worldwide. The SARS epidemic of 2002-3, by comparison, killed fewer than a thousand. The success in containing the spread of SARS was due largely to the rapid global response of public health authorities, which was aided by insights resulting from mathematical models. Models enabled authorities to better understand how the disease spread and to assess the relative effectiveness of different control strategies. In this book, Lisa Sattenspiel and Alun Lloyd provide a comprehensive introduction to mathematical models in epidemiology and show how they can be used to predict and control the geographic spread of major infectious diseases. Key concepts in infectious disease modeling are explained, readers are guided from simple mathematical models to more complex ones, and the strengths and weaknesses of these models are explored. The book highlights the breadth of techniques available to modelers today, such as population-based and individual-based models, and covers specific applications as well. Sattenspiel and Lloyd examine the powerful mathematical models that health authorities have developed to understand the spatial distribution and geographic spread of influenza, measles, foot-and-mouth disease, and SARS. Analytic methods geographers use to study human infectious diseases and the dynamics of epidemics are also discussed. A must-read for students, researchers, and practitioners, no other book provides such an accessible introduction to this exciting and fast-evolving field.

From the Back Cover"Sattenspiel and Lloyd do a first-rate job of making a lot of material accessible to a broad audience. They focus on a handful of examples and provide comprehensive insights. I found this book to be tightly and cogently written, supplying a level of detail that will be really useful for advanced undergraduates, graduate students, and researchers. It is one I would certainly recommend."--Andrew P. Dobson, Princeton UniversityAbout the AuthorLisa Sattenspiel is professor of anthropology at the University of Missouri. Alun Lloyd is associate professor of mathematics at North Carolina State University.