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	Nota di contenuto	Introduction to analyzing and modeling spatial and temporal dynamics of infectious diseases / Dongmei Chen, Bernard Moulin, Jianhong Wu -- Modeling the spread of infectious diseases : a review / Dongmei Chen -- West Nile virus : a narrative from bioinformatics and mathematical modeling studies / U.S.N. Murty, Amit Kumar Banerjee and Jianhong Wu -- West Nile virus risk assessment and forecasting using statistical and dynamical models / Ahmed Abdelrazec, Yurong Cao, Xin Gao, Paul Proctor, Hui Zheng, and Huaiping Zhu -- Using mathematical modeling to integrate disease surveillance and global air transportation data / Julien Arino and Kamran Khan -- Mathematical modeling of malaria models with spatial effects / Daozhou Gao and Shigui Ruan -- Avian influenza spread and transmission dynamics / Lydia Bourouiba, Stephen Gourley, Rongsong Liu, John Takekawa, and Jianhong Wu -- Analyzing the potential impact of bird migration on the global spread of H5N1 avian influenza (2007-2011) using spatio-temporal mapping methods / Heather Richardson and Dongmei Chen -- Cloud computing-enabled cluster detection using a flexibly shaped scan statistic for real-time syndromic surveillance / P. Belanger and K. Moore -- Mapping the distribution of malaria : current approaches and future directions / L.R. Johnson, K.D. Lafferty, A. McNally, E. Mordecai, K. Paaijmans, S. Pawar, S.J. Ryan -- Statistical modeling of spatio-

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Sommario/riassunto	Features modern research and methodology on the spread of infectious diseases and showcases a broad range of multi-disciplinary and state-of-the-art techniques on geo-simulation, geo-visualization, remote sensing, metapopulation modeling, cloud computing, and pattern analysisGiven the ongoing risk of infectious diseases worldwide, it is crucial to develop appropriate analysis methods, models, and tools to assess and predict the spread of disease and evaluate the risk. Analyzing and Modeling Spatial and Temporal Dynamics of Infectious Diseases features mathematical and spatial modeling approac