1.	Record Nr.	UNINA9910814269203321
	Titolo	Analyzing and modeling spatial and temporal dynamics of infectious diseases / / edited by Dongmei Chen, Bernard Moulin, Jianhong Wu
	Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, Inc., , [2015] ©2015
	ISBN	1-118-62991-4 1-118-63001-7 1-118-63003-3
	Descrizione fisica	1 online resource (499 p.)
	Disciplina	616.9
	Soggetti	Communicable diseases
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	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-

temporal infectious disease transmission / Rob Deardon, Xuan Fang and Grace Pui Sze Kwong -- Spatio-temporal dynamics of schistosomiasis in China : bayesian-based geostatistical analysis / Zhi-Jie Zhang -- Spatial analysis and statistical modeling of 2009 H1N1 pandemic in the greater Toronto area / Frank Wen, Dongmei Chen, Anna Majury -- West Nile virus mosquito abundance modeling using a non-stationary spatio-temporal geostatistics / Eun-Hye Yoo, Dongmei Chen, Curtis Russel -- Spatial pattern analysis of multivariate disease data / Cindy X. Feng and Charmaine Dean -- The zoonosismags project (part 1) : population-based geosimulation of zoonoses in an informed virtual geographic environment / Bernard Moulin, Mondher Bouden, Daniel Navarro -- Zoonosismags project (part 2) : complementarity of a rapid-propotyping tool and of a full-scale geosimulator for population-based geosimulation of zoonoses / Bernard Moulin, Daniel Navarro, Dominic Marcotte, Said Sedrati -- Web-mapping and behaviour pattern extraction tools to assess lyme disease risk for humans in peri-urban forests / Hedi Haddad, Bernard Moulin, Franck Manirakiza Christelle Maha, Vincent Godard and Samuel Mermet -- An integrated approach for communicable disease geosimulation based on epidemiological, human mobility and public intervention models / Hedi Haddad, Bernard Moulin, Marius Thariault -- Smartphone trajectories as data sources for agent-based infection spread modeling / M.R. Friesen and R.D. McLeod.

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