

1. Record Nr.	UNINA9910781099203321
Titolo	Dynamical modeling and analysis of epidemics [[electronic resource] /] / edited by Zhien Ma and Jia Li
Pubbl/distr/stampa	New Jersey, : World Scientific, 2009
ISBN	1-282-44166-3 9786612441660 981-279-750-5
Descrizione fisica	1 online resource (513 p.)
Altri autori (Persone)	MaZhien <1935-> LiJia <1974->
Disciplina	614.4/2 614.4011
Soggetti	Epidemiology - Mathematical models Medical
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	Preface; List of Contributors; Contents; 1. Basic Knowledge and Modeling on Epidemic Dynamics; 2. Ordinary Differential Equations Epidemic Models; 3. Modeling of Epidemics with Delays and Spatial Heterogeneity; 4. The Epidemic Models with Impulsive Effects; 5. Structured Epidemic Models; 6. Applications of Epidemic Modeling; Bibliography; Index
Sommario/riassunto	This timely book covers the basic concepts of the dynamics of epidemic disease, presenting various kinds of models as well as typical research methods and results. It introduces the latest results in the current literature, especially those obtained by highly rated Chinese scholars. A lot of attention is paid to the qualitative analysis of models, the sheer variety of models, and the frontiers of mathematical epidemiology. The process and key steps in epidemiological modeling and prediction are highlighted, using transmission models of HIV/AIDS, SARS, and tuberculosis as application examples.