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Titolo	Modeling cities and regions as complex systems : from theory to planning applications / / Roger White, Guy Engelen, and Inge Uljee
Pubbl/distr/stampa	Cambridge, Massachusettes : , : MIT Press, , [2015] ©2015
ISBN	0-262-33138-1 0-262-33137-3
Descrizione fisica	1 online resource (354 p.)
Disciplina	307.1/216
Soggetti	City planning Regional planning
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	Contents; Acknowledgments; 1 Introduction; 2 Theory and Consequences; 3 Approaches to Modelling Cities and Regions; 4 Urban Systems and Spatial Competition; 5 The Fractal Forms of Urban Land Use Patterns; 6 Urban and Regional Land Use Dynamics; 7 The Bigger Picture; 8 The Cellular Automaton Eats the Regions; 9 Issues of Calibration, Validation, and Methodology; 10 Emerging Theory; 11 Modelling in Support of Spatial Planning and Policy-Making; 12 Paths to the Future; References; Index; Plates
Sommario/riassunto	"Cities and regions grow (or occasionally decline), and continuously transform themselves as they do so. This book describes the theory and practice of modeling the spatial dynamics of urban growth and transformation. As cities are complex, adaptive, self-organizing systems, the most appropriate modeling framework is one based on the theory of self-organizing systems -an approach already used in such fields as physics and ecology. The book presents a series of models, most of them developed using cellular automata (CA), which are inherently spatial and computationally efficient. It also provides discussions of the theoretical, methodological, and philosophical issues that arise from the models. A case study illustrates the use of these models in urban and regional planning. Finally, the book presents a

	new, dynamic theory of urban spatial structure that emerges from the models and their applications. The models are primarily land use models, but the more advanced ones also show the dynamics of population and economic activities, and are integrated with models in other domains such as economics, demography, and transportation. The result is a rich and realistic representation of the spatial dynamics of a variety of urban phenomena. The book is unique in its coverage of both the general issues associated with complex self-organizing systems and the specifics of designing and implementing models of such systems."--

2. Record Nr. UNISA996575294703316

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ISBN	1-5386-1016-7
Descrizione fisica	1 online resource (123 pages)
Disciplina	620.11
Soggetti	Nanostructured materials Nanotechnology Nanoelectromechanical systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia