

1. Record Nr.	UNINA9910484819703321
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Titolo	Synergetic cities : information, steady state and phase transition : implications to urban scaling, smart cities and planning // Hermann Haken, Juval Portugali
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] Â©2021
ISBN	3-030-63457-4
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XII, 260 p. 62 illus., 8 illus. in color.)
Collana	Springer Series in Synergetics
Disciplina	629.04
Soggetti	Transportation engineering Traffic engineering Computational complexity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Cities as hybrid complex systems -- Synergetics: A short reminder -- SIRN, IA and their conjunction (SIRNIA) -- Formalism I. Bottom-up approach: From parts to order parameters -- Steady states and the city -- Phase transitions -- Phase transitions and the city -- Smart cities -- Cognitive planning and professional planning -- Conclusions.
Sommario/riassunto	The book offers a novel approach to the study of the complex dynamics of cities. It is based on (1) Synergetics as a science of cooperation and selforganization, (2) information theory including semantic and pragmatic aspects, and optimization principles, (3) a theory of steady state maintenance, and of (4) phase transition, i.e. qualitative changes of structure or behavior. From this novel theoretical vantage point, the book addresses particularly three issues that stand at the core of current discourse on cities: Urban Scaling, Smart Cities and City Planning. An important consequence of "the 21st century as the age of cities", is that the study of cities currently attracts scientists from a variety of disciplines, ranging from physics, mathematics and computer science, through urban studies, architecture, planning and human geography, to economics, psychology, sociology, public administration

and more. The book is thus likely to attract scholars, researchers and students of these research domains, of complexity theories of cities, as well as of general complexity theory. In addition, it is directed also to practitioners of urbanism, city planning and urban design.
