

1. Record Nr.	UNINA9910456822103321
Autore	Miller John H (John Howard), <1959->
Titolo	Complex adaptive systems [[electronic resource] ] : an introduction to computational models of social life / / John H. Miller and Scott E. Page
Pubbl/distr/stampa	Princeton, N.J., : Princeton University Press, c2007
ISBN	1-282-45811-6 1-282-93635-2 9786612458118 9786612936357 1-4008-3552-6 0-691-12702-6
Edizione	[Course Book]
Descrizione fisica	1 online resource (284 p.)
Collana	Princeton studies in complexity
Classificazione	70.03
Altri autori (Persone)	PageScott E
Disciplina	300.1/513
Soggetti	Social systems - Mathematical models Social sciences - Mathematical models Sociale relaties Computermodellen Electronic books.
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 (p. [255]-260) and index.
Nota di contenuto	pt. 1. INTRODUCTION. Introduction -- Complexity in social worlds -- pt. 2. PRELIMINARIES. Modeling -- On emergence -- pt. 3. COMPUTATIONAL MODELING. Computation as theory -- Why agent-based objects? -- pt. 4. MODELS OF COMPLEX ADAPTIVE SOCIAL SYSTEMS. A basic framework -- Complex adaptive social systems in one dimension -- Social dynamics -- Evolving automata -- Some fundamentals of organizational decision making -- pt. 5. CONCLUSIONS. Social science in between -- Epilogue -- Appendixes. A. An open agenda for complex adaptive social systems -- B. Practices for computational modeling.
Sommario/riassunto	This book provides the first clear, comprehensive, and accessible account of complex adaptive social systems, by two of the field's leading authorities. Such systems--whether political parties, stock

markets, or ant colonies--present some of the most intriguing theoretical and practical challenges confronting the social sciences. Engagingly written, and balancing technical detail with intuitive explanations, *Complex Adaptive Systems* focuses on the key tools and ideas that have emerged in the field since the mid-1990s, as well as the techniques needed to investigate such systems. It provides a detailed introduction to concepts such as emergence, self-organized criticality, automata, networks, diversity, adaptation, and feedback. It also demonstrates how complex adaptive systems can be explored using methods ranging from mathematics to computational models of adaptive agents. John Miller and Scott Page show how to combine ideas from economics, political science, biology, physics, and computer science to illuminate topics in organization, adaptation, decentralization, and robustness. They also demonstrate how the usual extremes used in modeling can be fruitfully transcended.

---