1. Record Nr. UNINA9910349317803321

Titolo	Multilevel Strategic Interaction Game Models for Complex Networks / / edited by Eitan Altman, Konstantin Avrachenkov, Francesco De Pellegrini, Rachid El-Azouzi, Huijuan Wang
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-24455-5
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (315 pages) : illustrations
Disciplina	519.3
Soggetti	System theory Sociophysics Econophysics Computational complexity Game theory Complex Systems Data-driven Science, Modeling and Theory Building Complexity Game Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Multi-Level Evolutionary Games -- Introduction -- Altruism in Groups -- From Egoism to Altruism in Groups -- Interacting Communities -- Random Delays -- Coupled State Policy Dynamics -- Section II: Epidemics/Information Diffusion -- Introduction -- Community Networks -- Interconnected Networks -- Adaptive Networks -- Section III: Networking Games -- Introduction -- Beat your Rival -- Stochastic Coalitional Dynamics -- Peering versus Transit -- Network Neutrality -- Section IV: Intermittency in Complex Systems -- Introduction -- Models with Adaptive Intermittent Behaviour -- Outline of the Forecasting Procedure -- Forecasting Procedure Based on Full Information -- Procedures with Incomplete Information.
Sommario/riassunto	This book provides a state-of-the-art overview on the dynamics and coevolution in multi-level strategic interaction games. As such it

summarizes the results of the European CONGAS project, which developed new mathematical models and tools for the analysis, prediction and control of dynamical processes in systems possessing a rich multi-level structure and a web of interwoven interactions among elements with autonomous decision-making capabilities. The framework is built around game theoretical concepts, in particular evolutionary and multi-resolution games, and includes also techniques drawn from graph theory, statistical mechanics, control and optimization theory. Specific attention is devoted to systems that are prone to intermittency and catastrophic events due to the effect of collective dynamics.