Record Nr. UNINA9910299640503321 Autore Gallegati Mauro Titolo Complex Agent-Based Models / / by Mauro Gallegati Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-93858-4 **ISBN** Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (90 pages) Collana New Economic Windows, , 2039-411X Disciplina 330.015195 Soggetti Macroeconomics Schools of economics System theory Statistical physics Macroeconomics/Monetary Economics//Financial Economics **Heterodox Economics** Complex Systems Applications of Nonlinear Dynamics and Chaos Theory Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Foreword -- I Axiomatic economics: the biggest dying paradigm -- II The crisis of economics -- III Economics como tiene que ser -- IV Where do we go, to go where we have to go? -- References. Sommario/riassunto This book offers a thorough introduction to the highly promising complex agent-based approach to economics, in which agent-based models (ABMs) are used to represent economic systems as complex and evolving systems composed of heterogeneous agents of limited rationality who interact with each other, generating the system's emergent properties in the process. This approach represents a response to the limitations of the dominant theory in economics, which does not consider the possibility of a major crisis, and to the inability of dynamic stochastic general equilibrium theory to generate empirically falsifiable propositions. In the new perspective, the focus is on identifying the elements of instability rather than the triggering

> event. As the theory of complexity demonstrates, the interactions of heterogeneous agents produce non-linearity: this puts an end to the

age of certainties. With ABMs, the methodology is "from the bottom up". The individual parameters and their distribution are estimated, and then evaluated to verify whether aggregate regularities emerge on the whole. In short, not only micro, but also meso and macro empirical validation are employed. Moreover, it shows that the mantra of growth should be supplanted by the concept of a growth. Given its depth of coverage, the book will enable students at the undergraduate and Master's level to gain a firm grasp of this important emerging approach. "This book is flower blossomed by one of the two greatest Italian economists." Bruce Greenwald, Columbia University "The author" s - the ABM prophet's - thoughts on economics have been at the forefront of the world. Without a firm belief in and dedication to human society, it is impossible to write such a book. This is a work of high academic value, which can help readers quickly understand the history and current situation of complex economic theory. In particular, we can understand the basic viewpoints, academic status, advantages and shortcomings of various schools of economic theory." Jie Wu, Guangzhou Milestone Software Co., China.