Record Nr. UNINA9910969915703321 Autore Holland John H (John Henry), <1929-2015.> Titolo Signals and boundaries: building blocks for complex adaptive systems // John H. Holland Pubbl/distr/stampa Cambridge, Mass., : MIT Press, ©2012 ©2012 **ISBN** 9786613806390 9780262304979 026230497X 9781282133815 1282133810 9780262305891 0262305895 Edizione [1st ed.] Descrizione fisica 1 online resource (317 p.) 003 Disciplina Soggetti Adaptive control systems Adaptation (Biology) - Mathematical models Signals and signaling - Mathematical models 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. Contents; Preface; 1 The Roles of Signals and Boundaries; 2 Theory and Nota di contenuto Models: General Principles: 3 Agents and Signal Processing: 4 Networks and Flows; 5 Adaptation; 6 Recombination and Reproduction; 7 Urn Models of Boundaries; 8 Boundary Hierarchies; 9 The Evolution of Niches-A First Look; 10 Language: Grammars and Niches; 11 Grammars as Finitely Generated Systems; 12 An Overarching Signal/Boundary Framework; 13 A Dynamic Generated System Model of Ontogeny: 14 A Complete Dynamic Generated System for Signal/Boundary Studies; 15 Mathematical Models of Generated Structures 16 A Short Version of the WholeReferences: Index

Complex adaptive systems (cas), including ecosystems, governments, biological cells, and markets, are characterized by intricate hierarchical

Sommario/riassunto

arrangements of boundaries and signals. In ecosystems, for example, niches act as semi-permeable boundaries, and smells and visual patterns serve as signals; governments have departmental hierarchies with memoranda acting as signals; and so it is with other cas. Despite a wealth of data and descriptions concerning different cas, there remain many unanswered questions about "steering" these systems. In Signals and Boundaries, John Holland argues that understanding the origin of the intricate signal/border hierarchies of these systems is the key to answering such questions. He develops an overarching framework for comparing and steering cas through the mechanisms that generate their signal/boundary hierarchies. Holland lays out a path for developing the framework that emphasizes agents, niches, theory, and mathematical models. He discusses, among other topics, theory construction; signal-processing agents; networks as representations of signal/boundary interaction; adaptation; recombination and reproduction; the use of tagged urn models (adapted from elementary probability theory) to represent boundary hierarchies; finitely generated systems as a way to tie the models examined into a single framework; the framework itself, illustrated by a simple finitely generated version of the development of a multi-celled organism; and Markov processes.

2. Record Nr. UNINA9910163316203321 Autore Fleet Suki Titolo Wild Summer Pubbl/distr/stampa Harmony Ink Press **ISBN** 1-63216-496-5 Descrizione fisica 1 online resource (138 p.) Young adult fiction Soggetti Friendship in adolescence Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto A novella from the Love Story UniverseAt fifteen, Christopher falls in love with a boy whose life he saves. But things go wrong and four years later, he wishes he'd acted differently. His conscience begins to haunt him, and he knows he must find Summer again. At seventeen, Summer pushes away the boy who saved him. Four years later, he is stuck in an abusive, damaging relationship. When he sees Christopher again, it's a sign he can't go on living like he is, but he can't begin to see a way out. For either boy to stand a chance at happiness, they must find each other and obliterate the wrongs of their shared past.