1.	Record Nr.	UNINA9910816962903321
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	Titolo	Autonomous agents and multi-agent systems : explorations in learning, self-organization, and adaptive computation / / Jiming Liu
	Pubbl/distr/stampa	Singapore ; ; River Edge, N.J., : World Scientific, c2001
	ISBN	1-281-96074-8
		9786611960742
		981-281-184-2
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (300 p.)
	Disciplina	006.3
	Soggetti	Intelligent agents (Computer software)
		Self-organizing systems
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	"By request of the author, the royalty for this book goes to United Nations Children Fund (UNICEF) and a youth public welfare fund."
	Nota di bibliografia	Includes bibliographic references (p. 257-276) and index.
	Nota di contenuto	Preface; Acknowledgements; Contents; Chapter 1 Introduction; 1.1 What is an Agent?; 1.2 Basic Questions and Fundamental Issues; 1.3 Learning; 1.3.1 Learning in Natural and Artificial Systems; 1.3.2 Agent Learning Techniques; 1.4 Neural Agents; 1.4.1 Self-Organizing Maps (SOM); 1.4.2 SOM Applications; 1.5 Evolutionary Agents; 1.6 Learning in Cooperative Agents; 1.7 Computational Architectures; 1.7.1 Subsumption Architecture; 1.7.2 Action Selection; 1.7.3 Motif Architecture; 1.8 Agent Behavioral Learning; 1.8.1 What is the Behavior of a Learning Agent?; 1.8.2 What is Behavioral Learning? Chapter 2 Behavioral Modeling, Planning, and Learning2.1 Manipulation Behaviors; 2.2 Modeling and Planning Manipulation Behaviors; 2.2.1 State-Oriented Representation; 2.2.2 State-Transition Function (); 2.2.3 Behavioral Planning Based on Action Schemata; 2.3 Manipulation Behavioral Learning; 2.3.1 Automatic Induction of State Transitions; 2.3.2 Empirical Sample Generation; 2.4 Summary; 2.5 Other Modeling, Planning, and Learning Methods; 2.5.1 Artificial Potential Fields (APF); 2.5.2 Artificial Neural Networks (ANN); 2.5.3 Similarities and Differences between APF and ANN; 2.5.4 APF Meets ANN 2.5.5 Summary2.6 Bibliographical and Historical Remarks; 2.6.1 Assembly Operation Planning; 2.6.2 AI Planning; 2.6.3 Manipulation

Sommario/riassunto	An autonomous agent is a computational system that acquires sensory data from its environment and decides by itself how to relate the external stimulus to its behaviors in order to attain certain goals. Responding to different stimuli received from its task environment, the agent may select and exhibit different behavioral patterns. The behavioral patterns may be carefully predefined or dynamically acquired by the agent based on some learning and adaptation mechanism(s). In order to achieve structural flexibility, reliability through redundancy, adaptability, and reconfigurability in real-worl