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Titolo	A Guided Tour of Artificial Intelligence Research : Volume II: AI Algorithms / / edited by Pierre Marquis, Odile Papini, Henri Prade
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Descrizione fisica	1 online resource (529 pages)
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Soggetti	Artificial intelligence Computational intelligence Computers Artificial Intelligence Computational Intelligence Theory of Computation
Lingua di pubblicazione	Inglese
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Note generali	Includes index.
Nota di contenuto	From the content: Heuristically Ordered Search in State Graphs -- Meta-Heuristics and Artificial Intelligence -- Automated Deduction.
Sommario/riassunto	The purpose of this book is to provide an overview of AI research, ranging from basic work to interfaces and applications, with as much emphasis on results as on current issues. It is aimed at an audience of master students and Ph.D. students, and can be of interest as well for researchers and engineers who want to know more about AI. The book is split into three volumes: - the first volume brings together twenty-three chapters dealing with the foundations of knowledge representation and the formalization of reasoning and learning (Volume 1. Knowledge representation, reasoning and learning) - the second volume offers a view of AI, in fourteen chapters, from the side of the algorithms (Volume 2. AI Algorithms) - the third volume, composed of sixteen chapters, describes the main interfaces and applications of AI (Volume 3. Interfaces and applications of AI). This second volume presents the main families of algorithms developed or used in AI to learn, to infer, to decide. Generic approaches to problem solving are

presented: ordered heuristic search, as well as metaheuristics are considered. Algorithms for processing logic-based representations of various types (first-order formulae, propositional formulae, logic programs, etc.) and graphical models of various types (standard constraint networks, valued ones, Bayes nets, Markov random fields, etc.) are presented. The volume also focuses on algorithms which have been developed to simulate specific ‘intelligent” processes such as planning, playing, learning, and extracting knowledge from data. Finally, an afterword draws a parallel between algorithmic problems in operation research and in AI.