Record Nr. UNINA9910968154603321 Handbook of knowledge representation / / edited by Bruce Porter, **Titolo** Vladimir Lifschitz and Frank van Harmelen Pubbl/distr/stampa Amsterdam,: Elsevier, 2008 **ISBN** 9786611144944 9781281144942 1281144940 9780080557021 0080557023 Edizione [1st ed.] Descrizione fisica 1 online resource (1035 p.) Foundations of artificial intelligence Collana Altri autori (Persone) PorterBruce <1956-> LifschitzVladimir Van HarmelenFrank Disciplina 006.332 Soggetti Knowledge representation (Information theory) 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 indexes. Nota di contenuto Front cover; Handbook of Knowledge Representation; Copyright page; Dedication: Preface: Editors: Contributors: Contents: Part I: General Methods in Knowledge Representation and Reasoning; Chapter 1. Knowledge Representation and Classical Logic; 1.1 Knowledge Representation and Classical Logic; 1.2 Syntax, Semantics and Natural Deduction; 1.3 Automated Theorem Proving; 1.4 Applications of Automated Theorem Provers; 1.5 Suitability of Logic for Knowledge Representation; Acknowledgements; Bibliography; Chapter 2. Satisfiability Solvers; 2.1 Definitions and Notation 2.2 SAT Solver Technology-Complete Methods2.3 SAT Solver Technology-Incomplete Methods: 2.4 Runtime Variance and Problem Structure; 2.5 Beyond SAT: Quantified Boolean Formulas and Model Counting; Bibliography; Chapter 3. Description Logics; 3.1 Introduction; 3.2 A Basic DL and its Extensions; 3.3 Relationships with other Formalisms; 3.4 Tableau Based Reasoning Techniques; 3.5 Complexity; 3.6 Other Reasoning Techniques; 3.7 DLs in Ontology Language

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## Sommario/riassunto

Knowledge Representation, which lies at the core of Artificial Intelligence, is concerned with encoding knowledge on computers to enable systems to reason automatically. The Handbook of Knowledge Representation is an up-to-date review of twenty-five key topics in knowledge representation, written by the leaders of each field. This book is an essential resource for students, researchers and practitioners in all areas of Artificial Intelligence.\* Make your computer smarter\* Handle qualitative and uncertain information\* Improve computational tractability to solve yo