1. Record Nr. UNINA9910462792403321 Autore Wang Pei <1958-> Titolo Non-axiomatic logic [[electronic resource]]: a model of intelligent reasoning / / Pei Wang Hackensack, NJ,: World Scientific, 2013 Pubbl/distr/stampa **ISBN** 981-4440-28-0 Descrizione fisica 1 online resource (200 p.) Disciplina 511.3/6 Soggetti Artificial intelligence Logic Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto CONTENTS: Preface: Acknowledgments: List of Tables: 1. Introduction: 1.1 Intelligence; 1.2 Reasoning System; 1.3 NAL Overview; 2. IL-1: Idealized Situation: 2.1 Categorical Language: 2.2 Experience-Grounded Semantics; 2.3 Syllogistic Inference Rules; 3. NAL-1: Basic Syntax and Semantics; 3.1 Evidence and its Measurement; 3.2 Two-Dimensional Truth-Value; 3.3 Representations of Uncertainty; 3.4 Experience and Belief; 4. NAL-1: Basic Inference Rules; 4.1 Local Inference Rules; Revision; Choice; 4.2 Forward Inference Rules; Deduction; Induction; Abduction; Conversion; Exemplification 4.3 Backward Inference Rules5. NARS: Basic Memory and Control; 5.1 Inference Tasks: 5.2 Bag-Based Storage: 5.3 Concept as a Unit: 5.4 Inference Cycle; 5.5 Properties of NARS; 6. NAL-2: Derivative Copulas; 6.1 Similarity Copula; Comparison; Analogy; Resemblance; 6.2 Instance Copula; 6.3 Property Copula; 7. NAL-3: Set-Theoretic Terms; 7.1 Compound Term; 7.2 Intersections; 7.3 Differences; 7.4 Multi-Component Sets; 7.5 Inference on Compound Terms; Choice; Composition; 8. NAL-4: Relational Terms; 8.1 Product and Acquired Relation; 8.2 Types of Conceptual Relation

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Sommario/riassunto

This book provides a systematic and comprehensive description of Non-Axiomatic Logic, which is the result of the author's research for about three decades. Non-Axiomatic Logic is designed to provide a uniform logical foundation for Artificial Intelligence, as well as an abstract description of the "laws of thought" followed by the human mind. Different from "mathematical" logic, where the focus is the regularity required when demonstrating mathematical conclusions, Non-Axiomatic Logic is an attempt to return to the original aim of logic, that is, to formulate the regularity in actual human thin