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Nota di contenuto	?-Automata -- Infinite Games -- Determinization and Complementation -- Determinization of Büchi-Automata -- Complementation of Büchi Automata Using Alternation -- Determinization and Complementation of Streett Automata -- Parity Games -- Memoryless Determinacy of Parity Games -- Algorithms for Parity Games -- Tree Automata -- Nondeterministic Tree Automata -- Alternating Tree Automata and Parity Games -- Modal ?-Calculus -- Modal ?-Calculus and Alternating Tree Automata -- Strictness of the Modal ?-Calculus Hierarchy -- Monadic Second-Order Logic -- Decidability of S1S and S2S -- The Complexity of Translating Logic to Finite Automata -- Expressive Power of Monadic Second-Order Logic and Modal ?-Calculus -- Tree-like Models -- Prefix-Recognizable Graphs and Monadic Logic -- The Monadic Theory of Tree-like Structures -- Two-Way Tree Automata Solving Pushdown Games -- Guarded Logics -- to Guarded Logics -- Automata for Guarded Fixed Point Logics -- Appendices -- Some Fixed Point Basics.
Sommario/riassunto	A central aim and ever-lasting dream of computer science is to put the development of hardware and software systems on a mathematical basis which is both firm and practical. Such a scientific foundation is needed especially for the construction of reactive programs, like

communication protocols or control systems. For the construction and analysis of reactive systems an elegant and powerful theory has been developed based on automata theory, logical systems for the specification of nonterminating behavior, and infinite two-person games. The 19 chapters presented in this multi-author monograph give a consolidated overview of the research results achieved in the theory of automata, logics, and infinite games during the past 10 years. Special emphasis is placed on coherent style, complete coverage of all relevant topics, motivation, examples, justification of constructions, and exercises.