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Collana	Studies in Universal Logic, , 2297-0290
Disciplina	511.3
Soggetti	Logic, Symbolic and mathematical Machine theory Logic Model theory Mathematical Logic and Foundations Formal Languages and Automata Theory Model Theory Lògica Teoria de màquines Teoria de models Llenguatges formals Llibres electrònics.
Lingua di pubblicazione	Inglese
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Nota di contenuto	- Introduction -- Part I Basics -- Categories -- Institutions -- Theories and Models -- Internal Logic -- Part II Advanced Topics -- Model Ultraproducts -- Saturated Models -- Preservation and Axiomatizability -- Interpolation -- Definability -- Part III Extensions -- Institutions with Proofs -- Models with States -- Many-valued Truth Institutions -- Part IV Applications to Computing -- Grothendieck Institutions -- Specification -- Logic Programming.
Sommario/riassunto	A model theory that is independent of any concrete logical system allows a general handling of a large variety of logics. This generality can be achieved by applying the theory of institutions that provides a precise general mathematical formulation for the intuitive concept of a logical system. Especially in computer science, where the development

of a huge number of specification logics is observable, institution-independent model theory simplifies and sometimes even enables a concise model-theoretic analysis of the system. Besides incorporating important methods and concepts from conventional model theory, the proposed axiomatic top-down methodology allows for a structurally clean understanding of model-theoretic phenomena. Consequently, results from conventional concrete model theory can be understood more easily, and sometimes even new results are obtained. Moreover, all this is also applied to non-classical model theories. This second edition introduces some novelties in the presentation style which aim to enhance the readability of the material and the proofs. Additional chapters have also been added.
