1.	Record Nr.	UNINA9910464679303321
	Titolo	Effective mathematics of the uncountable / / edited by Noam Greenberg, Victoria University of Wellington, Joel David Hamkins, City University of New York, Denis Hirschfeldt, University of Chicago, Russell Miller, City University of New York [[electronic resource]]
	Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2013
	ISBN	1-139-89203-7
		1-107-50349-3
		1-139-02859-6
		1-107-51647-1
		1-107-01451-4
		1-107-51376-6
		1-107-49634-9
		1-107-50615-8
	Descrizione fisica	1 online resource (viii, 197 pages) : digital, PDF file(s)
	Collana	Lecture notes in logic ; ; 41
	Disciplina	511.3/4
	Soggetti	Model theory
		Computable functions
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	Some results on R-computable structures / Wesley Calvert and John E. Porter -- Infinite time Turing machines and an application to the hierarchy of equivalence relations on the reals / Samuel Coskey and Joel David Hamkins -- Computable structure theory using admissible recursion theory on [omega]1 using admissibility / Noam Greenberg and Julia F. Knight -- Local computability and uncountable structures / Russell Miller -- Borel structures : a brief survey / Antonio Montalban and Andre Nies -- E-recursive intuitions / Gerald E. Sacks -- Reverse mathematics, countable and uncountable : a computational approach -- Effective model theory : an approach via [Sigma]-definability.
	Sommario/riassunto	Classical computable model theory is most naturally concerned with countable domains. There are, however, several methods - some old,

some new - that have extended its basic concepts to uncountable structures. Unlike in the classical case, however, no single dominant approach has emerged, and different methods reveal different aspects of the computable content of uncountable mathematics. This book contains introductions to eight major approaches to computable uncountable mathematics: descriptive set theory; infinite time Turing machines; Blum-Shub-Smale computability; Sigma-definability; computability theory on admissible ordinals; E-recursion theory; local computability; and uncountable reverse mathematics. This book provides an authoritative and multifaceted introduction to this exciting new area of research that is still in its early stages. It is ideal as both an introductory text for graduate and advanced undergraduate students and a source of interesting new approaches for researchers in computability theory and related areas.