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Autore	Schwartz Niels <1950->
Titolo	Semi-algebraic function rings via reflectors of partially ordered rings / / Niels C. Schwarz, James J. Madden
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer-Verlag, , [1999] ©1999
ISBN	3-540-48284-9
Edizione	[1st ed. 1999.]
Descrizione fisica	1 online resource (XIII, 279 p.)
Collana	Lecture Notes in Mathematics ; ; 1712
Disciplina	516.3
Soggetti	Semialgebraic sets Ordered algebraic structures Rings (Algebra)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Preordered and partially ordered rings -- Reflective subcategories -- Totally ordered and real closed fields -- Real spectra of preordered rings -- Epimorphisms of reduced porings -- Functions and representable porings -- Semi-algebraic functions -- Comparing reflectors -- Constructing reflectors -- H-closed epireflectors -- Quotient-closed reflectors -- The real closure reflector -- Arities of reflectors and approximations by H-closed reflectors -- Epimorphic extensions of reduced porings -- Essential monoreflectors -- Reflections of totally ordered fields -- von Neumann regular f-rings -- Totally ordered domains -- Reduced f-rings -- Rings of continuous piecewise polynomial functions -- Rings of continuous piecewise rational functions -- Discontinuous semi-algebraic functions -- The lattice of H-closed monoreflectors.
Sommario/riassunto	The book lays algebraic foundations for real geometry through a systematic investigation of partially ordered rings of semi-algebraic functions. Real spectra serve as primary geometric objects, the maps between them are determined by rings of functions associated with the spectra. The many different possible choices for these rings of functions are studied via reflections of partially ordered rings. Readers should feel comfortable using basic algebraic and categorical concepts.

As motivational background some familiarity with real geometry will be helpful. The book aims at researchers and graduate students with an interest in real algebra and geometry, ordered algebraic structures, topology and rings of continuous functions.
