1. Record Nr. UNINA9910453158003321

Autore	Waldhausen Friedhelm <1938->
Titolo	Spaces of PL manifolds and categories of simple maps [[electronic resource] /] / Friedhelm Waldhausen, Bjørn Jahren and John Rognes
Pubbl/distr/stampa	Princeton, : Princeton University Press, 2013
ISBN	1-4008-4652-8 1-299-05144-8
Edizione	[Course Book]
Descrizione fisica	1 online resource (193 p.)
Collana	Annals of Mathematics Studies ; ; 210 Annals of mathematics studies ; ; no. 186
Altri autori (Persone)	JahrenBjørn <1945-> RognesJohn
Disciplina	514/.22
Soggetti	Piecewise linear topology Mappings (Mathematics) Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front matter -- Contents -- Introduction -- 1. The stable parametrized h-cobordism theorem -- 2. On simple maps -- 3. The non-manifold part -- 4. The manifold part -- Bibliography -- Symbols -- Index
Sommario/riassunto	Since its introduction by Friedhelm Waldhausen in the 1970's, the algebraic K-theory of spaces has been recognized as the main tool for studying parametrized phenomena in the theory of manifolds. However, a full proof of the equivalence relating the two areas has not appeared until now. This book presents such a proof, essentially completing Waldhausen's program from more than thirty years ago. The main result is a stable parametrized h-cobordism theorem, derived from a homotopy equivalence between a space of PL h-cobordisms on a space X and the classifying space of a category of simple maps of spaces having X as deformation retract. The smooth and topological results then follow by smoothing and triangulation theory. The proof has two main parts. The essence of the first part is a "desingularization," improving arbitrary finite simplicial sets to polyhedra. The second part compares polyhedra with PL manifolds by a thickening procedure. Many of the techniques and results developed

should be useful in other connections.