

1. Record Nr.	UNINA9910972378803321
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Titolo	Goodwillie Approximations to Higher Categories
Pubbl/distr/stampa	Providence : , : American Mathematical Society, , 2021 ©2021
ISBN	9781470467494 1470467496
Edizione	[1st ed.]
Descrizione fisica	1 online resource (126 pages)
Collana	Memoirs of the American Mathematical Society ; ; v.272
Classificazione	55P9955P1555P6555U3555U40
Disciplina	514/.24
Soggetti	Homotopy groups Algebraic topology Spectral sequences (Mathematics) Class field towers Algebraic topology -- Homotopy theory -- None of the above, but in this section Algebraic topology -- Homotopy theory -- Classification of homotopy type Algebraic topology -- Homotopy theory -- Homotopy functors Algebraic topology -- Applied homological algebra and category theory -- Abstract and axiomatic homotopy theory Algebraic topology -- Applied homological algebra and category theory -- Topological categories, foundations of homotopy theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"July 2021, volume 272, number 1333 (third of 7 numbers)."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Main results -- Constructing n-excisive approximations -- Another construction of polynomial approximations -- Coalgebras in stable $[\infty]$ -operads -- The space of Goodwillie towers -- Examples. "We construct a Goodwillie tower of categories which interpolates between the category of pointed spaces and the category of spectra. This tower of categories refines the Goodwillie tower of the identity functor in a precise sense. More generally, we construct such a tower for a large class of ∞ -categories C and classify such Goodwillie towers in terms of the derivatives of the identity functor of C . As a particular application we show how this provides a model for the homotopy
Sommario/riassunto	

theory of simply-connected spaces in terms of coalgebras in spectra with Tate diagonals. Our classification of Goodwillie towers simplifies considerably in settings where the Tate cohomology of the symmetric groups vanishes. As an example we apply our methods to rational homotopy theory. Another application identifies the homotopy theory of p -local spaces with homotopy groups in a certain finite range with the homotopy theory of certain algebras over Ching's spectral version of the Lie operad. This is a close analogue of Quillen's results on rational homotopy" --
