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Titolo	The Geometric Hopf Invariant and Surgery Theory / / by Michael Crabb, Andrew Ranicki
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 The difference construction -- 2 Umkehr maps and inner product spaces -- 3 Stable homotopy theory -- 4 Z_2-equivariant homotopy and bordism theory -- 5 The geometric Hopf invariant -- 6 The double point theorem -- 7 The -equivariant geometric Hopf invariant -- 8 Surgery obstruction theory -- A The homotopy Umkehr map -- B Notes on Z2-bordism -- C The geometric Hopf invariant and double points (2010) -- References -- Index.
Sommario/riassunto	Written by leading experts in the field, this monograph provides homotopy theoretic foundations for surgery theory on higher-dimensional manifolds. Presenting classical ideas in a modern framework, the authors carefully highlight how their results relate to (and generalize) existing results in the literature. The central result of the book expresses algebraic surgery theory in terms of the geometric Hopf invariant, a construction in stable homotopy theory which captures the double points of immersions. Many illustrative examples and applications of the abstract results are included in the book, making it of wide interest to topologists. Serving as a valuable reference, this work is aimed at graduate students and researchers

interested in understanding how the algebraic and geometric topology fit together in the surgery theory of manifolds. It is the only book providing such a wide-ranging historical approach to the Hopf invariant, double points and surgery theory, with many results old and new. .