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Titolo	Twisted Morse Complexes : Morse Homology and Cohomology with Local Coefficients // by Augustin Banyaga, David Hurtubise, Peter Spaeth
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Disciplina	515.39
Soggetti	Dynamics Algebraic topology Manifolds (Mathematics) Global analysis (Mathematics) Dynamical Systems Algebraic Topology Manifolds and Cell Complexes Global Analysis and Analysis on Manifolds Homologia Teoria de Morse Llibres electrònics
Lingua di pubblicazione	Inglese
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Nota di contenuto	- 1. Introduction -- 2. The Morse Complex with Local Coefficients -- 3. The Homology Determined by the Isomorphism Class of $G$ -- 4. Singular and CW-Homology with Local Coefficients -- 5. Twisted Morse Cohomology and Lichnerowicz Cohomology -- 6. Applications and Computations.
Sommario/riassunto	This book gives a detailed presentation of twisted Morse homology and cohomology on closed finite-dimensional smooth manifolds. It contains a complete proof of the Twisted Morse Homology Theorem, which says that on a closed finite-dimensional smooth manifold the homology of the Morse–Smale–Witten chain complex with coefficients in a bundle of abelian groups $G$ is isomorphic to the singular homology

of the manifold with coefficients in  $G$ . It also includes proofs of twisted Morse-theoretic versions of well-known theorems such as Eilenberg's Theorem, the Poincaré Lemma, and the de Rham Theorem. The effectiveness of twisted Morse complexes is demonstrated by computing the Lichnerowicz cohomology of surfaces, giving obstructions to spaces being associative H-spaces, and computing Novikov numbers. Suitable for a graduate level course, the book may also be used as a reference for graduate students and working mathematicians or physicists.

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