Record Nr. UNINA9910807402203321 Autore Eichhorn Jurgen Titolo Relative index theory, determinants and torsion for open manifolds // Jurgen Eichhorn Pubbl/distr/stampa Singapore; ; Hackensack, NJ, : World Scientific, c2009 **ISBN** 1-282-44167-1 9786612441677 981-277-145-X Edizione [1st ed.] Descrizione fisica 1 online resource (353 p.) Disciplina 516.07 Index theory (Mathematics) Soggetti Manifolds (Mathematics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references (p. 331-337) and index. Nota di contenuto Contents: Introduction: I Absolute invariants for open manifolds and bundles; II Non-linear Sobolev structures; III The heat kernel of generalized Diracoperators; IV Trace class properties; V Relative index theory; VI Relative (-functions, 1]-functions, determinants and torsion; VII Scattering theory for manifolds with injectivity radius zero; References; List of notations; Index Sommario/riassunto For closed manifolds, there is a highly elaborated theory of numbervalued invariants, attached to the underlying manifold, structures and differential operators. On open manifolds, nearly all of this fails, with the exception of some special classes. The goal of this monograph is to establish for open manifolds, structures and differential operators an applicable theory of number-valued relative invariants. This is of great use in the theory of moduli spaces for nonlinear partial differential equations and mathematical physics. The book is self-contained: in

particular, it contains an outline