1. Record Nr. UNISA996466670303316 Autore Schwarz Gunter <1959-> Titolo Hodge decomposition: a method for solving boundary value problems // Gunter Schwarz Pubbl/distr/stampa Berlin, Germany:,: Springer,, [1995] ©1995 **ISBN** 3-540-49403-0 Edizione [1st ed. 1995.] Descrizione fisica 1 online resource (VIII, 164 p.) Collana Lecture Notes in Mathematics, , 0075-8434;; 1607 Disciplina 515.96 Soggetti Boundary value problems - Numerical solutions Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Bibliographic Level Mode of Issuance: Monograph Note generali Nota di contenuto Analysis of differential forms -- The hodge decomposition -- Boundary value problems for differential forms. Sommario/riassunto Hodge theory is a standard tool in characterizing differ- ential complexes and the topology of manifolds. This book is a study of the Hodge-Kodaira and related decompositions on manifolds with boundary under mainly analytic aspects. It aims at developing a method for solving boundary value problems. Analysing a Dirichlet form on the exterior algebra bundle allows to give a refined version of the classical decomposition results of Morrey. A projection technique leads to existence and regularity theorems for a wide class of boundary value problems for differential forms and vector fields. The book links aspects of the geometry of manifolds with the theory of partial

differential equations. It is intended to be comprehensible for graduate

students and mathematicians working in either of these fields.