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	Sommario/riassunto	The core of this monograph is the development of tools to derive well-posedness results in very general geometric settings for elliptic differential operators. A new generation of Calderón-Zygmund theory is developed for variable coefficient singular integral operators, which turns out to be particularly versatile in dealing with boundary value problems for the Hodge-Laplacian on uniformly rectifiable subdomains

of Riemannian manifolds via boundary layer methods. In addition to absolute and relative boundary conditions for differential forms, this monograph treats the Hodge-Laplacian equipped with classical Dirichlet, Neumann, Transmission, Poincaré, and Robin boundary conditions in regular Semmes-Kenig-Toro domains.Lying at the intersection of partial differential equations, harmonic analysis, and differential geometry, this text is suitable for a wide range of PhD students, researchers, and professionals. Contents:PrefaceIntroduction and Statement of Main ResultsGeometric Concepts and ToolsHarmonic Layer Potentials Associated with the Hodge-de Rham Formalism on UR DomainsHarmonic Layer Potentials Associated with the Levi-Civita Connection on UR DomainsDirichlet and Neumann Boundary Value Problems for the Hodge-Laplacian on Regular SKT DomainsFatou Theorems and Integral Representations for the Hodge-Laplacian on Regular SKT DomainsSolvability of Boundary Problems for the Hodge-Laplacian in the Hodge-de Rham FormalismAdditional Results and ApplicationsFurther Tools from Differential Geometry, Harmonic Analysis, Geometric Measure Theory, Functional Analysis, Partial Differential Equations, and Clifford AnalysisBibliographyIndex