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Sommario/riassunto	It is the main aim of this book to develop at an accessible, moderate level an L_2 theory for elliptic differential operators of second order on bounded smooth domains in Euclidean n -space, including a priori estimates for boundary-value problems in terms of (fractional) Sobolev spaces on domains and on their boundaries, together with a related spectral theory. The presentation is preceded by an introduction to the classical theory for the Laplace-Poisson equation, and some chapters providing required ingredients such as the theory of distributions, Sobolev spaces and the spectral theory in Hilbert spaces. The book grew out of two-semester courses the authors have given several times over a period of ten years at the Friedrich Schiller University of Jena. It is addressed to graduate students and mathematicians who have a working knowledge of calculus, measure theory and the basic elements of functional analysis (as usually covered by undergraduate courses) and who are seeking an accessible introduction to some aspects of the theory of function spaces and its applications to elliptic equations.