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Nota di contenuto	Weighted Sobolev space -- The Dirichlet problem in a half-space -- The Dirichlet problem in a bounded domain -- Estimates of derivatives -- Harmonic measure -- Exceptional sets on the boundary -- Applications of the L 2-method -- Domains with C1,?-boundary -- The space C n?1( ) -- C n?1-estimate of the solution of the Dirichlet problem with L 2-boundary data.
Sommario/riassunto	The Dirichlet problem has a very long history in mathematics and its importance in partial differential equations, harmonic analysis, potential theory and the applied sciences is well-known. In the last decade the Dirichlet problem with L2-boundary data has attracted the attention of several mathematicians. The significant features of this recent research are the use of weighted Sobolev spaces, existence results for elliptic equations under very weak regularity assumptions on coefficients, energy estimates involving L2-norm of a boundary data and the construction of a space larger than the usual Sobolev space W1, 2 such that every L2-function on the boundary of a given set is the trace of a suitable element of this space. The book gives a concise account of main aspects of these recent developments and is intended for researchers and graduate students. Some basic knowledge of Sobolev spaces and measure theory is required.