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Sommario/riassunto	A comprehensive survey of boundary conditions as applied in antenna and microwave engineering, material physics, optics, and general electromagnetics research. Boundary conditions are essential for determining electromagnetic problems. Working with engineering problems, they provide analytic assistance in mathematical handling of electromagnetic structures, and offer synthetic help for designing new electromagnetic structures. Boundary Conditions in Electromagnetics describes the most-general boundary conditions restricted by linearity and locality, and analyzes basic plane-wave reflection and matching problems associated to a planar boundary in a simple-isotropic medium. This comprehensive text first introduces known special cases of particular familiar forms of boundary conditions — perfect electromagnetic conductor, impedance, and DB boundaries — and then examines various general forms of boundary conditions. Subsequent chapters discuss sesquilinear boundary conditions and

practical computations on wave scattering by objects defined by various boundary conditions. The practical applications of less-common boundary conditions, such as for metamaterial and metasurface engineering, are referred to throughout the text. This book: . Describes the mathematical analysis of fields associated to given boundary conditions. Provides examples of how boundary conditions affect the scattering properties of a particle. Contains ample in-chapter exercises and solutions, complete references, and a detailed index. Includes appendices containing electromagnetic formulas, Gibbsian 3D dyadics, and four-dimensional formalism Boundary Conditions in Electromagnetics is an authoritative text for electrical engineers and physicists working in electromagnetics research, graduate or post-graduate students studying electromagnetics, and advanced readers interested in electromagnetic theory.