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Sommario/riassunto

"This book examines the characteristic mode (CM) theory for various electromagnetic structures as well as their applications in antenna engineering. The book covers the theoretical developments, numerical implementations, and the applications of the various CM theories. The authors provide antenna scientists and engineers with the theoretical developments, numerical implementations, and design methodologies of the CM theory. The readers will find the basic coverage of all aspects of the CM theory, which provides the background needed when they desire to solve their challenging antenna design problems using the CM theory. This book will cover the following topics in seven chapters: -- A detailed overview of the CM research history and the very important milestones; -- A comprehensive introduction of the CM theories for various electromagnetic structures including: PEC bodies, structures in multilayered medium, dielectric bodies, and N-port networks; -- Numerical implementation of the CM theories and the related algorithms; -- Systematic CM-based approaches to design low frequency platform mounted antenna systems; -- Novel feeding structures to excite the antenna platform as the radiator; -- CM-based microstrip antenna, dielectric resonant antenna, and antenna array designs; -- Experimental verifications illustrating the versatility of the CM theory in antenna engineering"--
