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Altri autori (Persone)	MittraRaj
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Characteristic Basis Function Method -- Parallelization strategies for the Characteristic Basis Function Method -- Fast Analysis of Periodic Antennas and Metamaterial-Based Waveguides -- Efficient Numerical Techniques for Analyzing Microstrip Circuits and Antennas etched on Layered Media via the Characteristic Basis Function Method -- The Locally Corrected Nyström Method for Electromagnetics -- An Efficient Dipole-Moment-based Method of Moments (MoM) formulation -- Linear embedding via Green's operators -- Solution to the Low-Frequency Breakdown Problem in Computational Electromagnetics -- New Finite Difference in Time Domain (FDTD) Electromagnetic Field Solver -- Asymptotic Techniques for Transient Analysis -- Numerical Techniques for Efficient Analysis of FSSs, EBGs and Metamaterials -- Efficient Hybrid Algorithms for Characterizing 3-D Doubly Periodic Structures, Finite Periodic Microstrip Patch Arrays, and Aperiodic Tilings.- FDTD Modelling of Transformation Electromagnetics Based Devices -- Designing Cloaks and Absorbing Blankets for Scattering Reduction Using Field and Impedance Transformation Techniques -- Field Transformation Approach to Designing Lenses -- Application of Signal Processing Techniques to Electromagnetic Sub-wavelength Imaging -- Wireless propagation modeling by using Ray-Tracing -- Modeling the Quantum Effects in Electromagnetic Devices -- FETI methods.
Sommario/riassunto	Emerging Topics in Computational Electromagnetics in Computational

Electromagnetics presents advances in Computational Electromagnetics. This book is designed to fill the existing gap in current CEM literature that only cover the conventional numerical techniques for solving traditional EM problems. The book examines new algorithms, and applications of these algorithms for solving problems of current interest that are not readily amenable to efficient treatment by using the existing techniques. The authors discuss solution techniques for problems arising in nanotechnology, bioEM, metamaterials, as well as multiscale problems. They present techniques that utilize recent advances in computer technology, such as parallel architectures, and the increasing need to solve large and complex problems in a time efficient manner by using highly scalable algorithms.