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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Basic Field-Solver Techniques for RC Extraction -- Fast Boundary Element Methods for Capacitance Extraction (I) -- Fast Boundary Element Methods for Capacitance Extraction (II) -- Resistance Extraction of Complex 3-D Interconnects -- Substrate Resistance Extraction with Boundary Element Method -- Extracting Frequency-Dependent Substrate Parasitics -- Process Variation Aware Capacitance Extraction -- Statistical Capacitance Extraction Based on Continuous-Surface Geometric Model -- Fast Floating Random Walk Method for Capacitance Extraction -- FRW Based Solver for Chip-Scale Large

Structures.

Sommario/riassunto

Resistance and capacitance (RC) extraction is an essential step in modeling the interconnection wires and substrate coupling effect in nanometer-technology integrated circuits (IC). The field-solver techniques for RC extraction guarantee the accuracy of modeling, and are becoming increasingly important in meeting the demand for accurate modeling and simulation of VLSI designs. *Advanced Field-Solver Techniques for RC Extraction of Integrated Circuits* presents a systematic introduction to, and treatment of, the key field-solver methods for RC extraction of VLSI interconnects and substrate coupling in mixed-signal ICs. Various field-solver techniques are explained in detail, with real-world examples to illustrate the advantages and disadvantages of each algorithm. This book will benefit graduate students and researchers in the field of electrical and computer engineering, as well as engineers working in the IC design and design automation industries. Dr. Wenjian Yu is an Associate Professor at the Department of Computer Science and Technology at Tsinghua University in China; Dr. Xiren Wang is a R&D Engineer at Cadence Design Systems in the USA.