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Sommario/riassunto

This Second Edition focuses on emerging topics and advances in the field of VLSI interconnections In the decade since High-Speed VLSI Interconnections was first published, several major developments have taken place in the field. Now, updated to reflect these advancements, this Second Edition includes new information on copper interconnections, nanotechnology circuit interconnects, electromigration in the copper interconnections, parasitic inductances, and RLC models for comprehensive analysis of interconnection delays and crosstalk. Each chapter is designed to exist independently or as a part of one coherent unit, and several appropriate exercises are provided at the end of each chapter, challenging the reader to gain further insight into the contents being discussed. Chapter subjects include: * Preliminary Concepts * Parasitic Resistances, Capacitances, and Inductances * Interconnection Delays * Crosstalk Analysis * Electromigration-Induced Failure Analysis * Future Interconnections High-Speed VLSI Interconnections, Second Edition is an indispensable reference for high-speed VLSI designers, RF circuit designers, and advanced students of electrical engineering.