

CMOS VLSI Design

A Circuits and Systems Perspective

Fourth Edition

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Cambridge University Press
The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, United Kingdom
32 Avenue of the Americas, New York, NY 10013-2473, USA
477 Williamstown Road, Port Melbourne, VIC 3207, Australia
Dock House, The Waterfront, Cape Town 8001, South Africa
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Nanoscale CMOS VLSI Circuits: Design for Manufacturability Sandip Kundu, Aswin Sreedhar, 2010-06-22 Cutting Edge CMOS VLSI Design for Manufacturability Techniques This detailed guide offers proven methods for optimizing circuit designs to increase the yield reliability and manufacturability of products and mitigate defects and failure Covering the latest devices technologies and processes Nanoscale CMOS VLSI Circuits Design for Manufacturability focuses on delivering higher performance and lower power consumption Costs constraints and computational efficiencies are also discussed in the practical resource Nanoscale CMOS VLSI Circuits covers Current trends in CMOS VLSI design Semiconductor manufacturing technologies Photolithography Process and device variability analyses and modeling Manufacturing Aware Physical Design Closure Metrology manufacturing defects and defect extraction Defect impact modeling and yield improvement techniques Physical design and reliability DFM tools and methodologies

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VLSI Design, 1985 **Computer Aids for VLSI Design** Steven M. Rubin, 1987 This textbook originally published in 1987 broadly examines the software required to design electronic circuitry including integrated circuits Topics include synthesis and analysis tools graphics and user interface memory representation and more The book also describes a real system called Electric *Introduction to VLSI Design* Eugene D. Fabricius, 1990 This text is for undergraduate VLSI Very Large Scale Integration design courses in departments of electrical and computer engineering departments A wide range of clear and understandable material is presented with emphasis on the relationship between circuit layout design and electrical system performance Topics range from basic physics of devices to introductory VLSI computer systems in both N MOS N Channel Metal Oxide Semiconductor and CMOS Complementary Metal Oxide Semiconductor Many worked examples and assignments make this text appropriate for students with no prior VLSI exposure *Books in Print Supplement*, 1994

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