1. Record Nr. UNINA9911020437803321

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Titolo	Integrated Devices for Artificial Intelligence and VLSI : VLSI Design, Simulation and Applications
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2024 ©2024
ISBN	1-394-20515-5 1-394-20514-7
Edizione	[1st ed.]
Descrizione fisica	1 online resource (382 pages)
Altri autori (Persone)	TripathiSuman Lata ChaudharyTarun Srinivasa RauK SinghMandeep
Disciplina	006.3
Soggetti	Artificial intelligence - Data processing Integrated circuits - Very large scale integration
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Series Page -- Title Page -- Copyright Page -- Contents -- Preface -- Chapter 1 Comparative Analysis of MOSFET and FinFET -- 1.1 Introduction -- 1.1.1 Scaling Issue -- 1.1.2 Problems in MOSFET -- 1.2 Double Gate -- 1.3 Advantages and Disadvantage of MOSFET -- 1.4 MOSFET Drawbacks -- 1.5 FinFET -- 1.6 SOI-FinFET -- 1.7 Issues with FinFET-Based Technology -- 1.8 Advantage of FinFET -- 1.9 Drawbacks of FinFET -- 1.10 Applications of FinFET Technology -- 1.11 Conclusion -- References -- Chapter 2 Nanosheet FET for Future Technology Scaling -- 2.1 Introduction -- 2.2 Device Description and Simulation Parameters -- 2.2.1 Analysis of the Results Obtained -- 2.2.2 Impact of Variation in Width Across Various Thickness Values on Device Characteristics -- 2.2.3 Transfer Characteristics -- 2.2.4 Impact of Geometrical Variations on ON Current -- 2.2.5 Impact of Geometrical Variations on OFF-Current -- 2.2.6 Impact of Geometrical Variations on Switching Ratio -- 2.2.7 Impact of Geometrical Variations on Threshold Voltage -- 2.2.8 Impact of Geometrical Variations on Subthreshold Swing -- 2.2.9 Impact of Geometrical Variations on DIBL

Sommario/riassunto

With its in-depth exploration of the close connection between microelectronics, AI, and VLSI technology, this book offers valuable

insights into the cutting-edge techniques and tools used in VLSI design automation, making it an essential resource for anyone seeking to stay ahead in the rapidly evolving field of VLSI design. Very large-scale integration (VLSI) is the inter-disciplinary science of utilizing advanced semiconductor technology to create various functions of computer system. This book addresses the close link of microelectronics and artificial intelligence (AI). By combining VLSI technology, a very powerful computer architecture confinement is possible. To overcome problems at different design stages, researchers introduced artificial intelligent (AI) techniques in VLSI design automation. AI techniques, such as knowledge-based and expert systems, first try to define the problem and then choose the best solution from the domain of possible solutions. These days, several CAD technologies, such as Synopsys and Mentor Graphics, are specifically created to increase the automation of VLSI design. When a task is completed using the appropriate tool, each stage of the task design produces outcomes that are more productive than typical. However, combining all of these tools into a single package offer has drawbacks. We can't really use every outlook without sacrificing the efficiency and usefulness of our output. The researchers decided to include AI approaches into VLSI design automation in order to get around these obstacles. AI is one of the fastest growing tools in the world of technology and innovation that helps to make computers more reliable and easy to use. Artificial Intelligence in VLSI design has provided high-end and more feasible solutions to the difficulties faced by the VLSI industry. Physical design, RTL design, STA, etc. are some of the most in-demand courses to enter the VLSI industry. These courses help develop a better understanding of the many tools like Synopsis. With each new dawn, artificial intelligence in VLSI design is continually evolving, and new opportunities are being investigated.