



Introduction to VLSI Design and Technology

By D.N. Bose, J.N. Roy

New Age International (P) Limited, 2011. Hardcover. Condition: New. First edition. Introduction to VLSI Design and Technology` deals with one of the most important technological developments of the last few decades. It describes how Silicon IC chips work and how they are made. Just as knowledge of computer software is now essential, basic knowledge of the principles of VLSI chips has also become indispensable for every Engineering and Science student. Starting from basic electronics, the authors introduce MOS devices, the building block of ICs, their structure and characteristics and use in Analog and Digital circuits. Coloured flow charts depict lucidly the sequential design procedures. The Technology behind the fabrication of Silicon chips follows - crystal growth, then advanced processes such as plasma deposition, ion implantation, and lithography. Testing, failure analysis and packaging are also important parts of successful design and fabrication of chips with densities of 1 million and more. The future lies with Nanoscale devices, based on quantum mechanical principles, which are discussed in the final chapter. This textbook is the first of its kind by Indian authors who have extensive experience in the Semiconductor Industry and Research. It is unique in presenting an integrated approach to both VLSI...



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