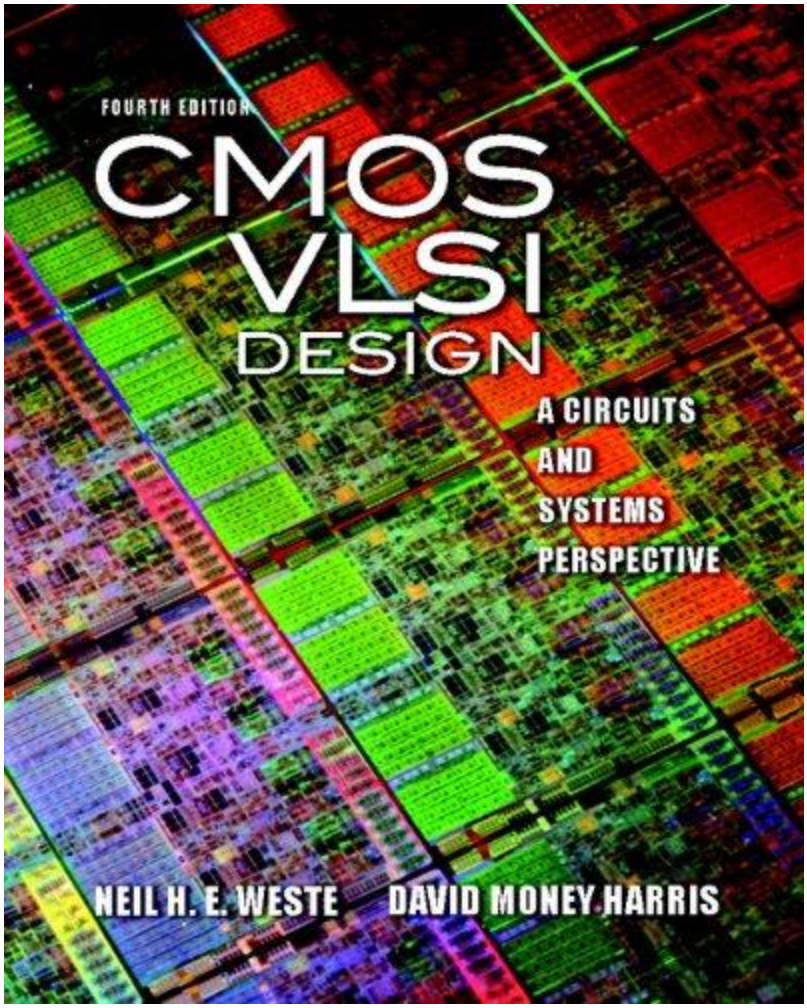
CMOS VLSI Design: A Circuits and Systems Perspective (4th Edition) by David Harris



Great Book

This extensively updated Fourth Edition covers the entire field of modern integrated circuit design, helping readers play effective roles in any contemporary CMOS VLSI project.

This text offers deep, practical coverage of delay, power, interconnect, robustness, SPICE, power consumption, VHDL/Verilog and SystemVerilog, 65 nm design, and many other topics. The authors link theory to practice through hundreds of problems, worked examples, and exercises, and share their unsurpassed experience through “war stories”, Historical Perspective sections, and detailed guidance for avoiding design pitfalls.

For all engineers working in VLSI design, circuit design, logic design, and related fields.

Personal Review: CMOS VLSI Design: A Circuits and Systems Perspective (4th Edition) by David Harris

While CMOS is the working horse of the electronics industry, there are very few good comprehensive (and readable) books on the subject. This is especially so if your university education focused mainly on software. A solid understanding of electronics is necessary to understand literature on CMOS design. Especially if you want to understand the complexities of designing for power-consumption optimization, speed, space and bill of material costs - and the tradeoffs involved in toggling between these four considerations.

Back in 2004, while I was a postgraduate student, I struggled with a book on the subject by Rabaey, Chandrakasan and Nikolic, "Digital Integrated Circuits - A Design Perspective, 2nd edition". I guess it was not easy simply because I was new to the discipline. However, I can only wish that back then, I had had such a great and so much more readable book like CMOS VLSI Design!

I warmly recommend this book.