

Further Reading

Berlin L., *The Man Behind the Microchip: Robert Noyce and the Invention of Silicon Valley*, Oxford University Press, 2005.

The fascinating biography of Robert Noyce, an inventor of the microchip and founder of Fairchild and Intel. For anyone thinking of working in Silicon Valley, this book gives insights into the culture of the region, a culture influenced more heavily by Noyce than any other individual.

Ciletti M., *Advanced Digital Design with the Verilog HDL, 2nd ed.*, Prentice Hall, 2010.

A good reference for Verilog 2005 (but not SystemVerilog).

Colwell R., *The Pentium Chronicles: The People, Passion, and Politics Behind Intel's Landmark Chips*, Wiley, 2005.

An insider's tale of the development of several generations of Intel's Pentium chips, told by one of the leaders of the project. For those considering a career in the field, this book offers views into the management of huge design projects and a behind-the-scenes look at one of the most significant commercial microprocessor lines.

Ercegovac M., and Lang T., *Digital Arithmetic*, Morgan Kaufmann, 2003.

The most complete text on computer arithmetic systems. An excellent resource for building high-quality arithmetic units for computers.

Hennessy J., and Patterson D., *Computer Architecture: A Quantitative Approach, 6th ed.*, Morgan Kaufmann, 2017.

The authoritative text on advanced computer architecture. If you are intrigued about the inner workings of cutting-edge microprocessors, this is the book for you.

Kidder T., *The Soul of a New Machine*, Back Bay Books, 1981.

A classic story of the design of a computer system. Three decades later, the story is still a page-turner and the insights on project management and technology still ring true.

Patterson D., and Waterman A., *The RISC-V Reader: An Open Architecture Atlas*, Strawberry Canyon, 2017.

A concise introduction to the RISC-V architecture by two of the RISC-V architects.

Pedroni V., *Circuit Design and Simulation with VHDL, 2nd ed.*, MIT Press, 2010.

A reference showing how to design circuits with VHDL.

SystemVerilog IEEE Standard (IEEE STD 1800).

The IEEE standard for the SystemVerilog Hardware Description Language; last updated in 2019. Available at ieeexplore.ieee.org.

VHDL IEEE Standard (IEEE STD 1076).

The IEEE standard for VHDL; last updated in 2017. Available at ieeexplore.ieee.org.

Wakerly J., *Digital Design: Principles and Practices, 5th ed.*, Pearson, 2018.

A comprehensive and readable text on digital design, and an excellent reference book.

Weste N., and Harris D., *CMOS VLSI Design, 4th ed.*, Addison-Wesley, 2010.

Very Large Scale Integration (VLSI) Design is the art and science of building chips containing oodles of transistors. This book, coauthored by one of our favorite writers, spans the field from the beginning through the most advanced techniques used in commercial products.