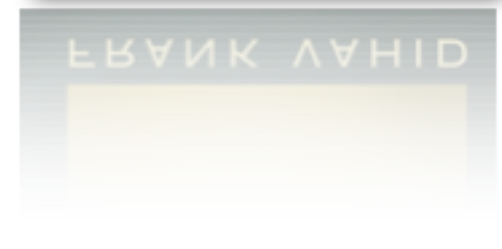
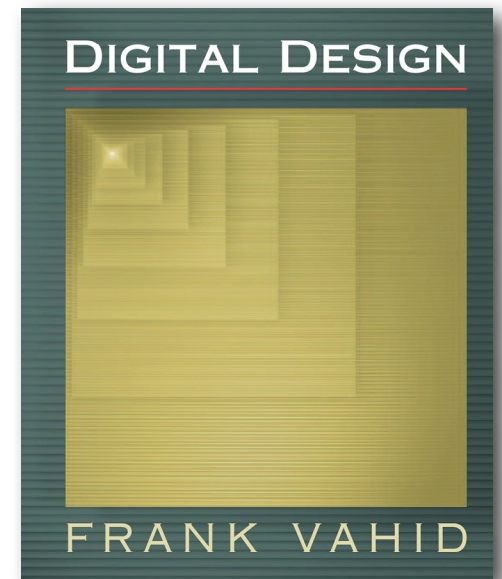


FINALLY, A DIGITAL DESIGN BOOK FOR THE BILLION TRANSISTOR ERA.

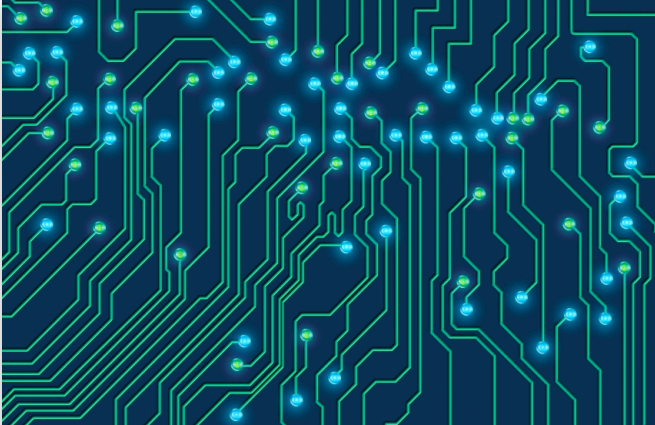
JOHN WILEY & SONS, INC.
111 RIVER STREET
HOBOKEN, NEW JERSEY 07030

"One of the most lively and original logic designs texts I've seen in many years! While most new texts claim a "modern" viewpoint, Vahid is one of the few I've seen that really comes across as modern, with increased emphasis on higher-level design."

— John P. Hayes, Professor, EECS, Univ. of Michigan.



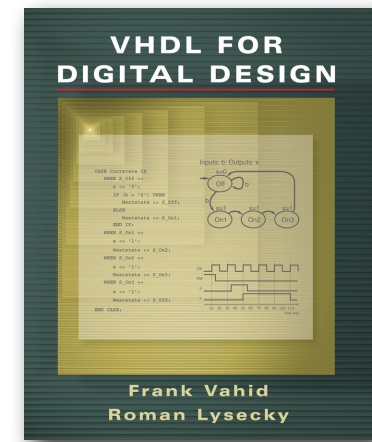
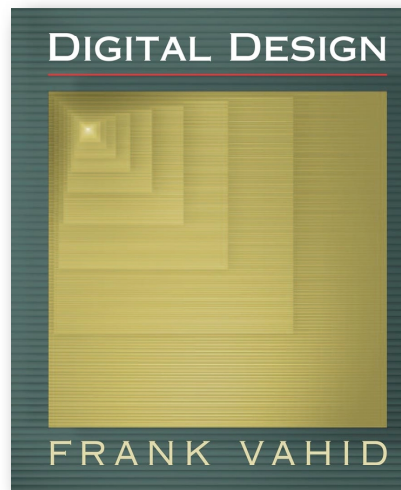
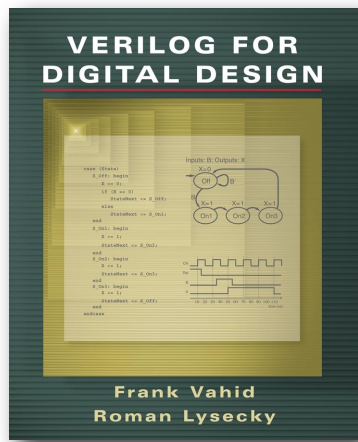
Addresssee Name
4321 First Street
Anytown, State 54321



Digital Design's extensive use of examples, RTL coverage, comparisons with microprocessors, and comfortable writing style, introduce students not just to underlying computer technology, but also a growing modern design field impacting nearly all electronic devices and relevant to CS, CE, and EE majors alike.

Discover why Vahid's *Digital Design* is adopted by schools like...

University of Michigan
University of Notre Dame
University of California, Irvine
University of California, San Diego
University of Arizona
Texas A&M University
University of California, Riverside
University of Alabama
Wright State University
And many more schools worldwide!



VAHID, DIGITAL DESIGN

Key Features

- Extensive use of examples. Basic ones teach new concepts, and applications—like pacemakers and cell phones—demonstrate relevance.
- Excellent hardware description language coverage. Synthesizable VHDL, Verilog, and SystemC coverage are all in the last chapter, with subsections corresponding to earlier chapters, allowing early or late HDL introduction, without cluttering main concepts. Companion VHDL/Verilog books allow deeper coverage or use in a subsequent course.
- Appropriate emphasis on RTL. Topic coverage naturally leads to register-transfer-level (RTL) design, which is covered substantially. Comparisons between custom digital circuit and micro-processor implementations provide a modern perspective.
- Modern coverage of optimization and tradeoffs. Tradeoffs are introduced alongside optimization, at all levels of abstraction (not just gate level), and cleanly distinguished from basic design.
- Bottom-up description of field-programmable gate arrays (FPGAs). FPGA coverage shows precisely how circuits can be mapped to lookup tables and switch matrices using bitstreams.
- Comfortable writing style. Students enjoy reading it.
- Extensive graphical animated PowerPoint slides, complete solutions manual, and more.

Visit <http://www.wiley.com/college/vahid> or <http://www.ddvahid.com> for more information

Digital Design by Frank Vahid, John Wiley and Sons, ISBN: 978-0-470-04437-7

Brief Table of Contents

1—Introduction
2—Combinational Logic Design
3—Sequential Logic Design: Controllers
4—Datapath Components
5—Register-Transfer Level (RTL) Design
6—Optimizations and Tradeoffs
7—Physical Implementation
8—Programmable Processors
9—Hardware Description Languages
A—Boolean Algebras
B—Additional Topics in Binary Number Systems
C—Extended RTL Design Example

Plus! 160-page VHDL and Verilog companion books allow for in-depth or follow-on coverage.

Also available with WileyPLUS!

WileyPLUS has helped over half a million students and instructors achieve positive learning outcomes by combining robust course management tools with interactive teaching and learning resources—including a complete online version of the text—all in one easy-to-use system. Go to www.wileyplus.com for more information.



Frank Vahid, Professor of Computer Science & Engineering at the Univ. of California, Riverside, brings academic and industry background. He holds EE and CS degrees; worked/consulted for HP, AMCC, NEC, Motorola, and medical equipment makers; holds 3 U.S. patents; taught digital topics for two decades and received teaching awards; set up UCR's Computer Engineering program; authored two textbooks on embedded systems; researches digital design topics and collaborates with Intel, IBM, Freescale, Xilinx, and others; and published over 120 papers on digital design topics (automation, architecture, and low-power).