R. Jacob Baker

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DESCRIPTION

A revised guide to the theory and implementation of CMOS analog and digital IC design

The fourth edition of CMOS: Circuit Design, Layout, and Simulation is an updated guide to the practical design of both analog and digital integrated circuits. The author—a noted expert on the topic—offers a contemporary review of a wide range of analog/digital circuit blocks including: phase-locked-loops, delta-sigma sensing circuits, voltage/current references, op-amps, the design of data converters, and switching power supplies.

CMOS includes discussions that detail the trade-offs and considerations when designing at the transistor-level. The companion website contains numerous examples for many computer-aided design (CAD) tools. Using the website enables readers to recreate, modify, or simulate the design examples presented throughout the book. In addition, the author includes hundreds of end-of-chapter problems to enhance understanding of the content presented. This newly revised edition:

- Provides in-depth coverage of both analog and digital transistor-level design techniques
- Discusses the design of phase- and delay-locked loops, mixed-signal circuits, data converters, and circuit noise
- Explores real-world process parameters, design rules, and layout examples
- Contains a new chapter on Power Electronics
Written for students in electrical and computer engineering and professionals in the field, the fourth edition of *CMOS: Circuit Design, Layout, and Simulation* is a practical guide to understanding analog and digital transistor-level design theory and techniques.

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### ABOUT THE AUTHOR

**R. JACOB (JAKE) BAKER, P HD,** is an engineer, educator, and inventor. He has more than twenty years of engineering experience and holds more than 200 granted or pending patents in integrated circuit design. Jake is the author of several circuit design books for Wiley-IEEE Press. In 2007, he received the Hewlett-Packard Frederick Emmons Terman Award.

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