Phase-Locking in High-Performance Systems: From Devices to Architectures
Behzad Razavi


DESCRIPTION

Comprehensive coverage of recent developments in phase-locked loop technology

The rapid growth of high-speed semiconductor and communication technologies has helped make phase-locked loops (PLLs) an essential part of memories, microprocessors, radio-frequency (RF) transceivers, broadband data communication systems, and other burgeoning fields. Complementing his 1996 Monolithic Phase-Locked Loops and Clock Recovery Circuits (Wiley-IEEE Press), Behzad Razavi now has collected the most important recent writing on PLL into a comprehensive, self-contained look at PLL devices, circuits, and architectures.

Phase-Locking in High-Performance Systems: From Devices to Architectures' five original tutorials and eighty-three key papers provide an eminently readable foundation in phase-locked systems. Analog and digital circuit designers will glean a wide range of practical information from the book's . . .

* Tutorials dealing with devices, delay-locked loops (DLLs), fractional-N synthesizers, bang-bang PLLs, and simulation of phase noise and jitter

* In-depth discussions of passive devices such as inductors, transformers, and varactors

* Papers on the analysis of phase noise and jitter in various types of oscillators

* Concentrated examinations of building blocks, including the design of oscillators, frequency dividers, and phase/frequency detectors
* Articles addressing the problem of clock generation by phase-locking for timing and digital applications, RF synthesis, and the application of phase-locking to clock and data recovery circuits

In tandem with its companion volume, Phase-Locking in High-Performance Systems: From Devices to Architectures is a superb reference for anyone working on, or seeking to better understand, this rapidly-developing and increasingly central technology.

**ABOUT THE AUTHOR**

BEHZAD RAZAVI, is Professor of Electrical Engineering at UCLA, where he conducts research on wireless transceivers, broadband data communications, and phenomena related to phase-locking. He is a Fellow of IEEE and an IEEE Distinguished Lecturer. He is the author of Principles of Data Conversion System Design, RF Microelectronics, and Design of Analog CMOS Integrated Circuits, and the editor of Monolithic Phase-Locked Loops and Clock Recovery Circuits

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