

1. Record Nr.	UNINA9910299695303321
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Titolo	Comparators in Nanometer CMOS Technology // by Bernhard Goll, Horst Zimmermann
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-44482-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (259 p.)
Collana	Springer Series in Advanced Microelectronics, , 1437-0387 ; ; 50
Disciplina	539.7092 620 620.11 620.5
Soggetti	Electronic circuits Nuclear physics Heavy ions Nanotechnology Electronics Microelectronics Materials science Circuits and Systems Nuclear Physics, Heavy Ions, Hadrons Nanotechnology and Microengineering Electronics and Microelectronics, Instrumentation Characterization and Evaluation of Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Fundamentals of clocked, regenerative comparators -- State-of-the-art nanometer CMOS -- Measurement circuits and setup -- Comparators in 120 nm CMOS -- Comparators in 65 nm CMOS -- Conclusions and comparison.
Sommario/riassunto	This book covers the complete spectrum of the fundamentals of clocked, regenerative comparators, their state-of-the-art, advanced CMOS technologies, innovative comparators inclusive circuit aspects,

their characterization and properties. Starting from the basics of comparators and the transistor characteristics in nanometer CMOS, seven high-performance comparators developed by the authors in 120nm and 65nm CMOS are described extensively. Methods and measurement circuits for the characterization of advanced comparators are introduced. A synthesis of the largely differing aspects of demands on modern comparators and the properties of devices being available in nanometer CMOS, which are posed by the so-called nanometer hell of physics, is accomplished. The book summarizes the state of the art in integrated comparators. Advanced measurement circuits for characterization will be introduced as well as the method of characterization by bit-error analysis usually being used for characterization of optical receivers. The book is compact, and the graphical quality of the illustrations is outstanding. This book is written for engineers and researchers in industry as well as scientists and Ph.D students at universities. It is also recommendable to graduate students specializing on nanoelectronics and microelectronics or circuit design.
