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Titolo	Pathological Elements in Analog Circuit Design / / edited by Mourad Fakhfakh, Marian Pierzchala
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Descrizione fisica	1 online resource (372 pages)
Collana	Lecture Notes in Electrical Engineering, , 1876-1100 ; ; 479
Disciplina	621.3815
Soggetti	Electronic circuits Microwaves Optical engineering Circuits and Systems Microwaves, RF and Optical Engineering
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Symbolic analysis and synthesis of analog circuits using nullors and mirrors -- Generalized Parameter Extraction Method for Symbolic Analysis of Analog Circuits Containing Pathological Elements -- Two-graph Based Semi-Topological Analysis of Electronic Circuits with Nullors and Pathological Mirrors -- Circuit Analysis With Nullors -- Symbolic Sensitivity Analysis Enhanced By Nullor Model and Modified Coates Flow Graph -- Synthesis of electronic circuits structures on the basis of active switches -- Applications of the Voltage Mirror-Current Mirror Pair in Realizing Active Building blocks -- Circuit Biasing Using Fixator Norator Pairs – A Tutorial -- Fixator -Norator Pair Based Design of Analog Circuits -- Application of Fixator Norator Pairs in Analog Circuit Design -- Nullor based negative feedback memristive amplifiers: symbolic oriented modelling and design.
Sommario/riassunto	This book is a compilation and a collection of tutorials and recent advances in the use of nullors (combinations of nullators and norators) and pathological mirrors in analog circuit and system design. It highlights the basic theory, trends and challenges in the field, making it an excellent reference resource for researchers and designers

working in the synthesis, analysis, and design of analog integrated circuits. With its tutorial character, it can also be used for teaching. Singular elements such as nullors and pathological mirrors can arguably be considered as universal blocks since they can represent all existing analog building blocks, and they allow complex integrated circuits to be designed simply and effectively. These pathological elements are now used in a wide range of applications in modern circuit/system theory, and also in design practice.