Record Nr. UNINA9910780032703321 Autore Roberts Gordon W. <1959-> Titolo Design and analysis of integrator-based log-domain filter circuits [[electronic resource] /] / Gordon W. Roberts and Vincent W. Leung Boston, : Kluwer Academic, c2000 Pubbl/distr/stampa **ISBN** 1-280-20604-7 9786610206049 0-306-47054-3 Edizione [1st ed. 2002.] Descrizione fisica 1 online resource (279 p.) The Springer International Series in Engineering and Computer Science, Collana , 0893-3405 ; ; 534 Altri autori (Persone) LeungVincent W Disciplina 621.3815/324 Soggetti Log domain filters - Design and construction Electric circuit analysis Metal oxide semiconductors, Complementary - Design and construction Bipolar integrated circuits - Design and construction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Log-Domain Integrators -- Log-Domain Filter Synthesis-I: Operational Nota di contenuto Simulation of LC Ladders -- Log-Domain Filter Synthesis-II: State-Space Formulation -- Nonideality Analysis of Biguadratic Log-Domain Filters -- Extending the Nonideality Analysis to High-Order Ladder Filters -- Experimental 1C Prototypes. Sommario/riassunto Design and Analysis of Integrator-Based Log-Domain Filter Circuits deals with the design and analysis of log-domain filter circuits. It describes several synthesis methods that aid the designer in developing bipolar or BiCMOS filter circuits with cut-off frequencies ranging from the low kilohertz range to several hundreds of megahertz. Filter response deviations due to transistor-level nonidealities are systematically analyzed, leading to effective electronic compensation schemes. Numerous examples are provided in the text with measured experimental data from IC prototypes. Design and Analysis of Integrator-Based Log-Domain Filter Circuits is intended for engineers

in research or development, as well as advanced-level engineering

students. Extensive discussion on filter text metrics should also interest engineers who are responsible for testing high-performance, high-speed analog or mixed-signal products.