1. Record Nr. UNINA9910299859803321 Autore Senani Raj Titolo Current Conveyors: Variants, Applications and Hardware Implementations / / by Raj Senani, D. R. Bhaskar, A. K. Singh Cham: .: Springer International Publishing: .: Imprint: Springer. . Pubbl/distr/stampa 2015 **ISBN** 3-319-08684-7 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (574 p.) 620 Disciplina 621.381 621.3815 Soggetti Electronic circuits **Electronics** Microelectronics Circuits and Systems Electronic Circuits and Devices Electronics and Microelectronics, Instrumentation 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 Part I Evolution and hardware implementation of Current Conveyors --The evolution and the history of Current Conveyors -- Hardware implementations of CCs using off-the-shelf ICs -- Integratable Bipolar CC architectures and commercially available IC CCs -- CMOS implementations of Current Conveyors -- Part II The early (First generation) applications of basic CCI and CCII -- Basic analog circuit building blocks using CCs and application of CCs in impedance synthesis -- First, Second and Higher order filter design using Current Conveyors -- Realization of Sinusoidal Oscillators Using CCs --Nonlinear Applications of CCs. This book serves as a single-source reference to Current Conveyors

Sommario/riassunto

and their use in modern Analog Circuit Design. The authors describe the various types of current conveyors discovered over the past 45 years, details of all currently available, off-the-shelf integrated circuit current conveyors, and implementations of current conveyors using

other, off-the-shelf IC building blocks. Coverage includes prominent bipolar/CMOS/Bi-CMOS architectures of current conveyors, as well as all varieties of starting from third generation current conveyors to universal current conveyors, their implementations and applications. •Describes all commercially available off-the-shelf IC current conveyors, as well as hardware implementations of current conveyors using other off-the-shelf ICs; • Describes numerous variants of current conveyors evolved over the past forty five years; • Describes a number of Bipolar/CMOS/Bi-CMOS architectures of current conveyors, along with their characteristic features; • Includes a comprehensive collection of over 400 application circuits using current conveyors; • Provides an exhaustive catalogue of current conveyor-based circuits for a variety of applications, including instrumentation amplifiers, precision rectifiers, simulated inductors, filters, sinusoidal oscillators, waveform generators, chaos generators, analog multipliers/dividers, memristive emulators and numerous others.