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Nota di contenuto	Introduction -- Hybrid Data Converters -- Hybrid and Segmented ADC Techniques to Optimize Power Efficiency and Area. The Case of a 0.076 mm2 600MS/s 12b SAR-DS ADC -- Interleaved Pipelined SAR ADCs: Combined Power for Efficient Accurate High-Speed Conversion -- Hybrid VCO-based 0-1 MASH and Hybrid DS SAR ADCs -- Hybrid Architecture for Reconfigurable SAR ADC -- A Hybrid ADC for High Resolution: the Zoom-ADC -- Advances in Bio-Medical Sensor Systems for Wearable Health -- An Ultra-Low Power, Robust Photoplethysomographic Readout Exploiting Compressive Sampling, Artifact Reduction and Sensor Fusion -- A 32kHz-DTCXO RTC Module with an Overall Accuracy of ±1ppm and an All-Digital 0.1ppm Compensation-Resolution Scheme -- Energy-Efficient High-Resolution resistor-based temperature sensors -- Ultra-Low Power Charge-Pump-Based Bandgap References -- An Energy-Efficient Integrating Dual-Slope Capacitance-to-Digital Converter -- FD-SOI Technology, Advantages for Analog/RF and Mixed-Signal Designs -- Pipeline and

SAR ADCs for Advanced Nodes -- Time-Based Biomedical AFE Readout in Ultra-Low Voltage, Small-Scale CMOS Technology -- An Ultra-Low Power Bluetooth Low-Energy Transceiver for IoT Applications -- Analog/Mixed-Signal Design in FinFET Technologies -- Analog design in 14nm and 28nm.

Sommario/riassunto

This book is based on the 18 invited tutorials presented during the 27th workshop on Advances in Analog Circuit Design. Expert designers from both industry and academia present readers with information about a variety of topics at the frontiers of analog circuit design, including the design of analog circuits in power-constrained applications, CMOS-compatible sensors for mobile devices and energy-efficient amplifiers and drivers. For anyone involved in the design of analog circuits, this book will serve as a valuable guide to the current state-of-the-art. Provides a state-of-the-art reference in analog circuit design, written by experts from industry and academia; Presents material in a tutorial-based format; Covers the design of analog circuits in power-constrained applications, CMOS-compatible sensors for mobile devices and energy-efficient amplifiers and drivers.