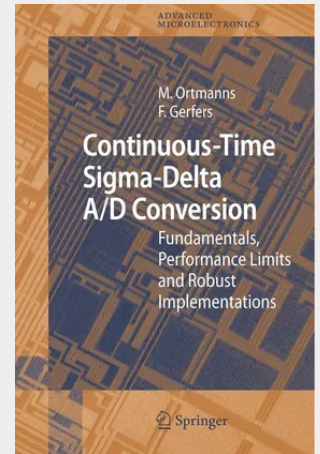


Continuous-Time Sigma-Delta A/D Conversion

Fundamentals, Performance Limits and Robust Implementations

Sigma-delta A/D converters are a key building block in wireless and multimedia applications. This comprehensive book deals with all relevant aspects arising during the analysis, design and simulation of the now widespread continuous-time implementations of sigma-delta modulators. The results of several years of research by the authors in the field of CT sigma-delta modulators are covered, including the analysis and modeling of different CT modulator architectures, CT/DT loop filter synthesis, a detailed error analysis of all components, and possible compensation/correction schemes for the non-ideal behavior in CT sigma-delta modulators. Guidance for obtaining low-power consumption and several practical implementations are also presented. It is shown that all the proposed new theories, architectures and possible correction techniques have been confirmed by measurements on discrete or integrated circuits. Quantitative results are also provided, thus enabling prediction of the resulting accuracy.

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