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Titolo	Analog Dithering Techniques for Wireless Transmitters [[electronic resource] /] / by Foad Arfaei Malekzadeh, Reza Mahmoudi, Arthur H.M. van Roermund
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Collana	Analog Circuits and Signal Processing, , 1872-082X ; ; 3
Disciplina	005
Soggetti	Electronic circuits Electronics Microelectronics Signal processing Image processing Speech processing systems Circuits and Systems Electronics and Microelectronics, Instrumentation Signal, Image and Speech Processing
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	Introduction -- Dithering -- Describing Functions -- Architectures and Topologies -- Linearity Analysis -- Spurious Analysis -- High Frequency Dithering -- Low Frequency Dithering -- Novel Interpretations of Dithering -- Conclusions.
Sommario/riassunto	This book describes innovative techniques and the theoretical background for design and analysis of high performance RF/Microwave transmitters. It introduces new, robust linearization/efficiency enhancement techniques, applicable to all of the switched mode power amplifiers. Novel analysis methods associated with these new techniques are also introduced and supporting measurement results are documented. Innovative graphical representation methods are used

to help the reader understand the matter intuitively. Applications for the techniques discussed are very extensive, ranging from data convertors to RF/Microwave/mm-wave wireless/wire line transmitters. The authors have avoided using lengthy formulas in the discussion and have used an intuitive and simple approach to go through the necessary details. Readers will gain valuable understanding of the dither phenomenon, its mechanism, effect and undesired side effects. The novel architectures introduced are simple, don't require complicated DSP techniques and are easy to implement. Introduces novel dithering techniques for linearization of a highly nonlinear power amplifiers, which are easy to implement; Enables more economical design of linear-efficient microwave transmitters; Provides power amplifier designers with new tools to address the linearity-efficiency compromise, a key challenge for any application and frequency range; Uses an intuitive and simple approach to present necessary details, along with graphical representation methods to enhance understanding. .
