



OPTIMUM CHAOTIC QUANTIZED SEQUENCES FOR ASYNCHRONOUS DS-CDMA SYSTEM (WedPmPO1)

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★ Abstract :

Using chaotic sequences for spreading is a new approach for optimising the BER (Bit Error Rate) performances in the DS-CDMA (Direct Sequence – Code Division Multiple Access) systems. This paper presents the use of a very well known family of PWAM (Piece-Wise Affine Markov) maps, namely (n, t) – tailed shifts maps, and their optimum quantized versions. This optimisation involves the variance minimisation for the mean MAI (Multiple Access Interference) term, which minimises also the mean BER under the SGA (Standard Gaussian Approximation) condition.