

**DISPERSION AND NONLINEARITY DEGREE FOR QUADRATIC
PERMUTATION POLYNOMIAL AND WELCH-COSTAS
INTERLEAVERS**

BY

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Abstract. This paper performs an analysis of QPP (quadratic permutation poly-nomial) and Welch-Costas interleavers with respect to randomizing quantities such as dispersion and nonlinearity degree. An upper bound for the dispersion of QPP interleavers and the nonlinearity degree for Welch-Costas interleavers were derived.

Key words: interleavers; randomizing; dispersion; nonlinearity degree; turbo codes.