

**CORR 2001-58**

## **Hyper-Bent Functions**

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**Abstract** Ben functions have maximal minimum distance to the set of affine functions. In other words, they achieve the maximal minimum distance to all the coordinate functions of affine monomials. In this paper we introduce a new class of bent functions which we call hyper-bent functions. Functions within this class achieve the maximal minimum distance to all the coordinate functions of *all* bijective monomials. We provide an explicit construction for such functions. We also extend our results to vectorial hyper-bent functions.

**Keywords** Boolean functions, bent functions, hyper-bent functions, non-linearity.