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Peter Beelen Sudhir R. Ghorpade Tom Høholdt

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and their Relatives

Peter Beelen, Sudhir R. Ghorpade, Tom Hoeholdt

(Submitted on 18 Jul 2011)

Affine Grassmann codes are a variant of generalized Reed-Muller codes and are closely related to Grassmann codes. These codes were introduced in a recent work [2]. Here we consider, more generally, affine Grassmann codes of a given level. We explicitly determine the dual of an affine Grassmann code of any level and compute its minimum distance. Further, we ameliorate the results of [2] concerning the automorphism group of affine Grassmann codes. Finally, we prove that affine Grassmann codes and their duals have the property that they are linear codes generated by their minimum-weight codewords. This provides a clean analogue of a corresponding result for generalized Reed-Muller codes.

Duals of Affine Grassmann Codes

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