Abstract

On the weight distribution of certain trace codes

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We present some simplifications in the argument of Schoof and van der Vlugt [3] concerning the weight distribution of the dual Melas and the dual Zetterberg codes. Moreover we relate the weight distribution of the duals of the exceptional good quaternary double error correcting codes of Dumer and Zinoviev [1], respectively of Gevorkyan, Avetisyan and Tigranyan [2] with the one of the dual Melas resp. dual Zetterberg codes and show this way that the duals of these quaternary codes have interesting parameters as well.

References

[1] I.Dumer and V.A.Zinoviev: *Some new maximal codes over $GF(4)$*, *Probl. Peredach.Inform* **14** (1978), 24-34, translation in *Problems in Information Transmission* (1979), 174-181.

[2] D.N. Gevorkyan, A.M. Avetisyan and G.A. Tigranyan: *On the structure of two-error-correcting in Hamming metric over Galois fields,* *Computational Techniques (in Russian)* **3**, Kuibyshev (1975), 19-21.

[3] R.Schoof and M. van der Vlugt: *Hecke operators and the weight distribution of certain codes,* *Journal of Combinatorial Theory A* **57** (1991), 163-186.