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Optimal ternary constant weight codes in l_1 -metric

In this talk, we discuss our recent progress on the existence of optimal ternary constant weight codes in l_1 -metric. We determine the maximum size of ternary codes of constant weight w and distance $2w - 2$ for all large length n . For distance $2w - 4$, we determine the coefficients of n^2 by constructing asymptotically optimal codes. The motivation of studying constant weight codes in l_1 -metric is from data storage in live DNA.