An Improvement of the Asymptotical Upper Bound for the Cardinality of Sidon Sets of Vectors with Binary Components

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Let G=(Z_2)^k. That is, the set of k-dimensional vectors with binary components. We say that a subset of G (call this A) is a 'Sidon Set' if all pairwise sums, a_i+a_j (i<j) in A, are distinct (mod 2). The problem is to estimate the cardinality of A (typically denoted |A|) asymptotically. In this project, we improve the current best upper bound of |A| - provided in 1969 by the Swedish mathematician, Bernt Lindström

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