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Recent Methods of Constructing New Linear Codes over \mathbb{Z}_4

Codes over finite rings has been a very active area of research. Among all finite rings, the quaternary ring \mathbb{Z}_4 has a special place. A database of best known codes over \mathbb{Z}_4 was introduced a few years ago. Recently, there has been an increased research activity on codes over rings that are extensions of \mathbb{Z}_4 and many new linear codes obtained from this work have been added to the database. In this talk, we will describe recent methods of constructing quaternary linear codes from codes over various extensions of the quaternary ring.