# Upper bounds for constant dimension codes

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Constant dimension codes were introduced to correct errors and/or erasures over the operator channel in random network coding. More precisely, they are subsets of the set of $k$-dimensional subspaces of $\mathbb{F}_q^v$ such that the intersection between any two codewords has dimension at most $t$. Setting the minimum distance to $d := 2k - 2t$, i.e., the so-called subspace distance, one can ask for the maximum cardinality $A_q(v, d; k)$ of such a code given the parameters $q$, $v$, $k$, and $d$. In this talk we will review the known upper bounds for constant dimension codes and highlight their relations. More recent upper bounds based on the linear programming method for linear (projective) divisible block codes or integer linear programming formulations will also be discussed.

# References

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