

Linear Codes – Orthogonality and Automorphisms

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Abstract

A subspace of the n -dimensional vector space over a finite field with q elements is called a q -ary linear code of length n . For a given inner product in the considered vector space, the intersection of a code C with its orthogonal complement is called the hull of C . The talk will focus on linear codes with hull of dimension 0, called linear codes with complementary duals (LCD codes), and on linear codes that coincide with their hulls, called self-orthogonal codes. Furthermore, the structure of these codes depending on their automorphisms will be considered.