

Mass Formulae for Self-dual, Self-orthogonal and LCD Codes over Finite Commutative Chain Rings

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Abstract

In this talk, we will present explicit mass formulae for all self-orthogonal, self-dual and linear with complementary dual (LCD) codes of an arbitrary length over finite commutative chain rings. These mass formulae are useful in classifying these three classes of linear codes over finite commutative chain rings up to equivalence. We will illustrate this by classifying self-orthogonal, self-dual and LCD codes of some special lengths over certain special chain rings.

Keywords

Sesquilinear form, Witt decomposition Theory, Equivalence of codes.

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