Abstract

Some connections between self-dual codes, combinatorial designs and secret-sharing schemes

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In the present work we study a class of singly even self-dual codes with the special property that the minimum weight of their shadow is 1. Some of these codes support 1 and 2-designs. Using them, we describe two types of schemes based on codes - with one-part secret and with two-part secret. Similar schemes can be constructed from self-dual codes that support 3-designs.