

Abstract

Distance-regular graphs from the Mathieu groups

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In this talk we will describe a construction of distance-regular graphs admitting a transitive action of the five Mathieu groups M_{11} , M_{12} , M_{22} , M_{23} and M_{24} . We will also discuss a possibility of permutation decoding of the codes spanned by the adjacency matrices of the graphs constructed and find small PD-sets for some of the codes.

Joint work with Dean Crnković and Andrea Švob.