Binary Self-Orthogonal Codes and Their Neighbor Graph

E. Saltürk

Atlas University, İstanbul, Türkiye

a joint work with

S. T. Dougherty[1],

[1]*University of Scranton, Scranton, USA*

Abstract

We define the neighbor graph of binary self-orthogonal codes where two codes are connected by an edge if they can be reached by the neighbor construction. We show that this graph consists of two connected and regular subgraphs consisting of self-orthogonal codes that contain the all-one vector and self-orthogonal codes that do not contain the all-one vector. For each of the subgraphs, we give the number of vertices and edges and the degree of the vertices.

Keywords

Self-orthogonal codes, Neighbor codes, Graph.