The Threshold Strong Dimension of Trees

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Let G be a graph and W be a set of vertices of G. A vertex w in W is said to strongly resolve two vertices u and v in G if there is either a shortest u-w path that contains v or a shortest v-w path that contains u. The set W is called a strong resolving set if every pair of vertices in G is strongly resolved by a vertex of W. A smallest strong resolving set is called a strong basis and its cardinality, the strong dimension. The smallest strong dimension among all graphs having G as a spanning subgraph is called the threshold strong dimension of G. Benakli et al. have proved that the threshold strong dimension of trees, with strong dimension 3 or 4, is 2. In this talk, we will present some extensions of these results.

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