

Irredundance Graphs, Part 2

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An *irredundant set* D of a graph $G = (V, E)$ is a set of vertices such that each vertex is either isolated in the subgraph induced by D or adjacent to a vertex in $V - D$ that is nonadjacent to all other vertices in D . The *upper irredundance number* $\text{IR}(G)$ is the largest cardinality of an irredundant set of G and an $\text{IR}(G)$ -set is an irredundant set of cardinality $\text{IR}(G)$.

The *IR-graph* of G is a graph whose vertices are the IR-sets of G and where two sets D and D' are adjacent if and only if D' is obtained from D by exchanging a single vertex of D for an adjacent vertex in D' . In this talk we show that IR-trees of diameter 3 are precisely the double stars $S(2n, 2n)$.