

On saturation numbers of double stars

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Let $G = (V(G), E(G))$ be a connected, simple graph of order n . For a fixed graph H , G is called H -saturated if G contains no copy of H , but adding any missing edge e of G will lead to at least one copy of H in $G+e$. The saturation number of H is defined as $sat(n, H) = \min\{|E(G)| : G \text{ is } H\text{-saturated}\}$. A double star, denoted by $S_{s,t}$, is a tree obtained by an edge uv and joining s independent vertices to u , t independent vertices to v , respectively. In this talk, we will present some recent results on the lower and upper bounds for $sat(n, S_{s,t})$ and characterize extremal graphs which achieve those bounds.

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