

On the Saturation Spectrum of Graphs
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Given a graph H , we say that a graph G is H -saturated if it does not contain H as a subgraph but the addition of any edge $e \notin E(G)$ results in at least one copy of H as a subgraph. The study of saturated graphs has a long and deep history. The question of the minimum number of edges in an H -saturated graph on n vertices, known as the *saturation number* and denoted $sat(n, H)$, has been addressed for many different types of graphs. The saturation number contrasts the classic question of the maximum number of edges possible in a graph G on n vertices that does not contain a copy of H , known as the *Turán number* (or *extremal number*) and denoted $ext(n, H)$. The *saturation spectrum* of the family of H -saturated graphs on n vertices is the set of all possible sizes ($|E(G)|$) of an H -saturated graph. We present several recent results that determine the saturation spectrum for several classes of graphs.