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An update on the Hirsch Conjecture

The Hirsch conjecture was posed in 1957 in a letter from Warren M. Hirsch to George Dantzig. It states that the graph of a d -dimensional polytope with n facets cannot have diameter greater than $n - d$. Despite being one of the most fundamental, basic and old problems in combinatorial geometry and optimization, what we know is quite scarce. Most notably, not even a polynomial upper bound is known for the diameters that are conjectured to be linear. In contrast, very few polytopes are known where the bound $n - d$ is attained. We survey results on both the positive and on the negative side of the conjecture.