

Pósa's Conjecture

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Abstract

In 1962, Pósa conjectured that if G is a graph on n vertices with minimum degree at least $2n/3$, then G has a Hamilton square cycle (a Hamilton cycle with all 2-chords). In 1996, Komlós, Sárközy, and Szemerédi used the Regularity and Blow-up Lemmas to prove Pósa's Conjecture for graphs on at least n_0 vertices, where n_0 is a huge constant. Recently we proved Pósa's conjecture for graphs on at least 2×10^8 vertices using probabilistic techniques along with Fan and Kierstead's results from the 90's.