On the Loebl-Komlós-Sós Conjecture for graphs with no path on $k + 4$ vertices

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Let G be a graph with at least half of the vertices having degree at least k. Loebl, Komlós, and Sós conjectured that the graph G contains every tree with k edges as a subgraph. We prove that the Loebl-Komlós-Sós Conjecture holds for graphs that contain no path on $k + 4$ vertices.