

## THE SMALLEST HARMONIC INDEX OF TREES WITH GIVEN MAXIMUM DEGREE

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### Abstract

The harmonic index of a graph  $G$ , denoted by  $H(G)$ , is defined as the sum of weights  $2/[d(u) + d(v)]$  over all edges  $uv$  of  $G$ , where  $d(u)$  denotes the degree of a vertex  $u$ . In this paper we establish a lower bound on the harmonic index of a tree  $T$ .

**Keywords:** harmonic index, trees.

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