Chen, Dong; Wang, Weifan
(2, 1)-total labelling of outerplanar graphs. (English)\[Zbl 1129.05041\]

Authors’ abstract: The $(2, 1)$-total labelling number $\lambda_T^2(G)$ of a graph $G$ is the width of the smallest range of integers that suffices to label the vertices and the edges of $G$ such that no two adjacent vertices have the same label, no two adjacent edges have the same label and the difference between the labels of a vertex and its incident edges is at least 2. In this paper we prove that if $G$ is an outerplanar graph with maximum degree $\Delta(G)$, then $\lambda_T^2(G) \leq \Delta(G) + 2$ if $\Delta(G) \geq 5$, or $\Delta(G) = 3$ and $G$ is 2-connected, or $\Delta(G) = 4$ and $G$ contains no intersecting triangles.

Reviewer: Martin Knor (Bratislava)

MSC:

05C78 Graph labelling (graceful graphs, bandwidth, etc.)

Keywords:

$(2, 1)$-total labelling; outerplanar graph; maximum degree

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References:


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