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Donglei Yang, Joshua Carlson, Andrew Owens, K E Perry, Inne Singgih*
(isinggih@math.sc.edu), **Zi-Xia Song, Fangfang Zhang** and **Xiaohong Zhang**. *Antimagic orientations of graphs with large maximum degree.*

Given a digraph D with m arcs, a bijection $\tau : A(D) \rightarrow \{1, 2, \dots, m\}$ is an antimagic labeling of D if no two vertices in D have the same vertex-sum, where the vertex-sum of a vertex u in D under τ is the sum of labels of all arcs entering u minus the sum of labels of all arcs leaving u . We say (D, τ) is an antimagic orientation of a graph G if D is an orientation of G and τ is an antimagic labeling of D . Motivated by the conjecture of Hartsfield and Ringel from 1990 on antimagic labelings of graphs, Hefetz, Mütze, and Schwartz in 2010 initiated the study of antimagic orientations of graphs, and conjectured that every connected graph admits an antimagic orientation. This conjecture seems hard, and few related results are known. However, it has been verified to be true for regular graphs and biregular bipartite graphs. In this paper, we prove that every connected graph G on $n \geq 9$ vertices with maximum degree at least $n - 5$ admits an antimagic orientation. (Received September 03, 2019)