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Daniel P Johnston* (daniel.p.johnston@wmich.edu). *On a Twin Edge Coloring Conjecture.*

For a connected graph G of order at least 3 and an integer $k \geq 2$, a twin edge k -coloring of G is a proper edge coloring of G using elements of \mathbf{Z}_k so that the induced vertex coloring in which the color of a vertex v in G is the sum (in \mathbf{Z}_k) of the colors of the edges incident with v is a proper vertex coloring. The minimum k for which G has a twin edge k -coloring is called the twin chromatic index of G . It has been conjectured that the twin chromatic index of every connected graph G of order at least 3 lies between the maximum degree of G and 2 plus the maximum degree of G . In this talk, we present recent progress on this conjecture as well as new results in this area of research. (Received January 20, 2015)