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**Michal Karonski\*** ([michal@mathcs.emory.edu](mailto:michal@mathcs.emory.edu)), Department of Mathematics and Computer Sci, Emory University, Atlanta, GA 30322. *Vertex-coloring edge-weightings.*

A weighting of the edges of a graph with integer weights gives rise to a weighting of the vertices, the weight of a vertex being the sum of the weights of its incident edges. It is natural to consider edge weighting where we require that *adjacent* vertices have different weights — that is, the vertex weighting induce a proper coloring of the graph.

Karóński, Łuczak and Thomason in 2001 conjectured that the edges of every graph that does not contain a component isomorphic to  $K_2$  can be weighted with the integers  $\{1, 2, 3\}$  such that the resultant vertex weighting is a proper coloring. In my talk I will discuss some recent developments regarding the above conjecture and a related problem of edge-weighting in which we require that *all* vertices have different weights, i.e., weighting which induces a trivial vertex coloring. (Received January 17, 2011)