

1125-03-1961 **Oscar Levin*** (oscar.levin@unco.edu), School of Mathematical Sciences, Campus Box 122, 501
20th Street, Greeley, CO 80639. *Graph labelings and computability theory*. Preliminary report.

A *graph labeling* assigns weights to vertices, edges, or both, subject to certain conditions. For example, a labeling of vertices is *graceful* or *harmonious* if the difference or sum, respectively, of labels on adjacent vertices is distinct for all edges, while a labeling is *edge-magic* if the sum of the labels on an edge and its incident vertices is constant for all edges. In this talk we will explore graph labelings in the context of computability theory, sharing a few initial findings and many directions for future research. (Received September 19, 2016)