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68588-0130, and **Michael S. Jacobson, Hemanshu Kaul** and **Douglas B. West**. *A
Generalization of Kundu's k -Factor Theorem*. Preliminary report.

Given nonnegative integer lists d_1, d_2, \dots, d_j , the degree sequence packing problem is to determine if there exist edge-disjoint graphs G_1, G_2, \dots, G_j on the same vertex set such that G_i has degree sequence d_i . A famous example of a result on degree sequence packing is Kundu's k -factor theorem, which states that if d is a graphic sequence, and if the sequence d' obtained by adding k to each entry of d is also graphic, then there exists a graph G with degree sequence d and an edge-disjoint k -regular graph on the same vertex set. We will consider extensions to Kundu's theorem, particularly when a graphic sequence can be packed with multiple 1-regular graphs. (Received August 31, 2009)