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Casey Kenneth Moffatt* (caseymoffatt@msn.com), 9143 W 75th CR, Arvada, CO 80005. *On The Potential Function For Degree Sequences Of Multi-Graphs*. Preliminary report.

A sequence of nonnegative integers $\pi = (d_1, d_2, \dots, d_n)$ is *graphic* if there is a (simple) graph G with degree sequence π . In this case, G is said to *realize* or be a *realization of* π . Given a graph H , a graphic sequence π is *potentially H -graphic* if there is some realization of π that contains H as a subgraph. In 1991, Erdős, Jacobson and Lehel posed the following, which can be viewed as a degree sequence analogue to the classical Turán problem, “Determine the minimum integer $\sigma(H, n)$ such that every n -term graphic sequence with sum at least $\sigma(H, n)$ is potentially H -graphic.” The exact value of $\sigma(H, n)$ has been determined for a number of specific classes of graphs (including cliques, cycles, complete bigraphs and others). In this talk, we will discuss the extension of this *potential function*, $\sigma(H, n)$, where H is a (loopless) multi-graph. (Received September 17, 2013)