1121-05-239 **Catherine Erbes**, **Michael Ferrara**, **Timothy LeSaulnier**, **Ryan Martin**, **Casey Moffatt** and **Paul Wenger*** (pswsma@rit.edu). *The Asymptotic Behavior of the Potential Function.*

A sequence π of non-negative integers is *graphic* if there is a simple graph G whose degree sequence is π; in this case, G is a *realization* of π. Given a graph H, the sequence π is *potentially H-graphic* if there is a realization of π that contains H as a subgraph.

In 1991, Erdős, Jacobson, and Lehel defined the *potential number of H*, denoted $\sigma(H, n)$, to be the minimum integer such that every n-term graphic sequence with sum $\sigma(H, n)$ is potentially H-graphic. Since the sum of the terms of π is twice the number of edges in a realization of π, determining the potential number can be thought of as a potential version of the classical Turán problem. Here we present results on the asymptotic behavior of the potential function for arbitrary graphs, including precise asymptotics and stability results. This is joint work with Catherine Erbes, Michael Ferrara, Timothy LeSaulnier, Ryan Martin, and Casey Moffatt. (Received July 19, 2016)