1162-05-172 **Michael Ferrara*** (mferrara@nsf.gov), **Catherine Erbes**, **Nathan Graber** and **Paul Wenger**. *Stability Theorems for Degree Sequences of Graphs and Hypergraphs.* Preliminary report.

A graphic sequence π is *potentially H-graphic* if there is some realization of π that contains H as a subgraph. The Erdős-Jacobson-Lehel problem asks to determine $\sigma(H,n)$, the minimum even integer such that any n-term graphic sequence π with sum at least $\sigma(H,n)$ is potentially H-graphic. The parameter $\sigma(H,n)$ is known as the *potential function* of H, and can be viewed as a degree sequence variant of the classical extremal function $\mathrm{ex}(n,H)$.

In this talk, we investigate a stability concept for the potential number, inspired by Simonovits' classical result on the stability of the extremal function. We first define a notion of stability for the potential number that is a natural analogue to the stability given by Simonovits. However, under this definition, many families of graphs are not σ-stable, establishing a stark contrast between the extremal and potential functions. We then extend this notion to the degree sequences of uniform hypergraphs and provide some new results that demonstrate some interesting differences between the graph case and that for r-graphs with $r \geq 3$. (Received August 31, 2020)