Juliette Bruce* (juliette.bruce@berkeley.edu), Lauren Cranton Heller and Mahrud Sayrafi. Multigraded Castelnuovo-Mumford regularity and Powers. Preliminary report.

A classical result of Cutkosky, Herzog and Trung and Kodiyalam states that if $I$ is a homogenous ideal in a standard graded polynomial ring then the Castelnuovo-Mumford regularity of $I^n$ is a linear function in $n$. I will discuss generalizations of this result describing the multigraded Castelnuovo-Mumford of powers of ideals for multigraded polynomial rings. (Received August 09, 2021)