1120-60-248 **David Sivakoff*** (dsivakoff@stat.osu.edu), 1958 Neil Ave., 440N Cockins Hall, Columbus, OH 43210. Bootstrap percolation on products of complete graphs and lattices.

We study threshold θ bootstrap percolation on graphs of the form $\mathbb{Z}_m^{d_1} \times K_n^{d_2}$ starting from initial occupation density p. Our primary interest is in classifying the location and nature of phase transitions in the probability of the event Span, that all vertices eventually become occupied, as $m, n \to \infty$ and $p \to 0$, with d_1, d_2, θ fixed. We find that when $d_1 = 1$ and $d_2 = 2$, the phase transition may be sharp or gradual depending on the relative scaling of m and n. When $d_1 = 2$, we find interesting connections between this model and a bootstrap process with heterogeneous activation thresholds, which allows us to locate a sharp phase transition in the probability of Span. Based on joint works with Janko Gravner. (Received February 22, 2016)