1151-60-156   **Shirshendu Chatterjee**, **David Sivakoff*** (`dsivakoff@stat.osu.edu`) and **Matthew Wascher**. *Contact process with avoidance.*

The classical contact process is a Markov process on a graph in which each vertex is either infected or healthy. While infected, a vertex sends the infection to each of its healthy neighbors at rate λ, and recovers at rate 1. Our variant of the contact process incorporates avoidance behavior in the form of temporary link-deactivation: each healthy vertex attempts to deactivate its link with each of its infected neighbors at rate α, and a link reactivates when the infected neighbor recovers. We show that this model exhibits a phase transition on the integer lattice, not unlike the classical model, while on the star graph, the contact process with avoidance exhibits polynomial, rather than exponential, persistence. (Received August 16, 2019)