Lionel Levine* (levine@math.cornell.edu) and Vittoria Silvestri (silvestri@mat.uniroma1.it). How far do Activated Random Walkers spread from a single source? Preliminary report.

Activated Random Walk is the most promising candidate for a “universal model of self-organized criticality”. I’ll state several conjectures that aim to convert these buzzwords (“universal model of SOC”) into mathematics. Among the conjectured properties are hyperuniformity (the variance of the number of particles in a ball scales sublinearly with volume), and fast mixing (cutoff in total variation when the system reaches its critical density). (Received August 11, 2020)