

Title:

Contact process on a dynamic random regular graph: sharp phase transition.

Abstract:

Abstract: We consider the contact process on a dynamic random regular graph with an edge flip dynamic preserving the uniform measure. We show that there exists a critical value for the infection parameter, below which the contact process dies out in a time logarithmic in the size of the graph, and above which it survives for an exponentially long time, with high probability. The proof goes by studying a limiting process called herds process, which was introduced by da Silva, Oliveira and Valesin. Based on a joint work with Daniel Valesin.