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DISSERTATION PROPOSAL

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Contact Process on Graphs

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ABSTRACT

The contact process (CP) is a model of an interacting particle system. Infected sites become healthy at a constant rate, while healthy sites become infected at a rate proportional to the number of infected neighbors. People study the contact process on integer lattices, e.g., Bezuidenhout and Grimmett (1990), as well as regular trees, for example, Lalley and Sellke (1998), Lalley (1999),

On the other hand, the random d -regular graph is proved to be locally tree-like, (Lubetzky and Sly, 2010). The local tree structure brings hope of borrowing techniques and results about CP on trees. So we will discuss possible generalization of results to random d -regular graphs.