Abstract Submitted
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Epidemic spreading on interacting networks with preferred degrees[1] SHIVAKUMAR JOLAD, R.K.P. ZIA, B. SCHMITTMANN, Virginia Tech — We discuss the SIS contact process on a network of two interacting communities, each with its own preferred degree of connections. Postulating various rules for an individuals to form intra-community and inter-community links, we find novel stationary (active) states, in addition to the expected absorbing states. The dynamics of infected individuals in the two communities can be quite different. Using Monte Carlo techniques, we explore the effects on both the network structure and the contact process due to different types of interactions between the communities. We will also present a mean field analysis of contact processes on a generic M interacting communities and compare these results with the simulation data.

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