

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Epidemics on adaptive networks with geometric constraints LEAH SHAW, College of William and Mary, IRA SCHWARTZ, Naval Research Lab — When a population is faced with an epidemic outbreak, individuals may modify their social behavior to avoid exposure to the disease. Recent work has considered models in which the contact network is rewired dynamically so that susceptibles avoid contact with infectives. We consider extensions in which the rewiring is subject to constraints that preserve key properties of the social network structure. Constraining to a fixed degree distribution destroys previously observed bistable behavior. The most effective rewiring strategy is found to depend on the spreading rate.

Leah Shaw
College of William and Mary

Date submitted: 27 Nov 2007

Electronic form version 1.4