

FIXED LENGTH OF INFECTIVE PERIOD FOR ATTACKING WORMS IN COMPUTER NETWORK

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ABSTRACT

Susceptible(S)-Infectious (I) model for transmission of worms in Computer network is formulated. In the SIS model for the infective periods of fixed length due to the attack of computer worms three different epidemic models have been formulated. Threshold, equilibria and their stability are found with cyber mass actions incidence. Thresholds, R_0 determine the outcomes of the disease. If $R_0 \leq 1$, the infective fraction of model disappear so the disease die out, while $R_0 > 1$, the infected fraction persist and the feasible region is an asymptotic stable region for the endemic equilibrium state. Numerical methods are employed to solve and simulate the system of equation developed. The effect of time delay on infected nodes has been analyzed which also includes worms transmission in vertical ways on the nodes of computer network.

KEYWORDS : SIS, Computer network,Attacking Worms.
