

E-DYNAMIC SIR EPIDEMIC MODEL AND STABILITY ANALYSIS UNDER VACCINATION IN COMPUTER NETWORK

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Abstract

We develop a three dimensional e -epidemic model to control spread of malicious objects in computer network under vaccination. Stability analysis show that the diseases free equilibrium is globally asymptotic if $R_0^V < 1$ on the other hand if $R_0^V > 1$ then endemic equilibrium appears. Numerical methods are employed to solve and simulate the system of equations. The simulated results may help us to understand the spread and control of malicious objects.

Key Words : *Epidemic model, Malicious object, Stability Analysis, Threshold.*

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