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# A MODIFIED ANIDOTAL $e$-EPIDEMIOLOGICAL MODEL FOR MALICIOUS OBJECTS IN COMPUTER NETWORK

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**Abstract**

With a view to protect cyber world from different kind of malicious objects, an attempt has been made to develop an $e$-epidemic SIQRAS (Susceptible, Infectious, Quarantined, Recovered, Antidotal, Susceptible) model for the transmission of malicious objects in computer network and its various parametric characteristics are analyzed. Stability of the system has been established. Endemic equilibrium and bifurcation conditions are discussed. Numerical methods are employed to solve and simulate the system which may help us to understand the attacking behavior of the malicious objects in computer network. This may also give us a guideline to frame out the defense mechanism of such spreads of malicious objects in the computer network.

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Key Words : *Quarantine Epidemic Model, Malicious Objects, Computer Network, Antidotal.*

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