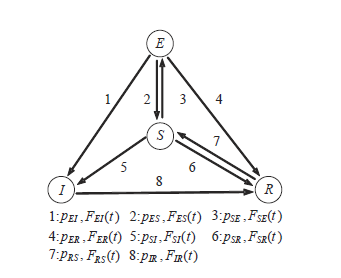
1. **Propagation model of smartphone worms based on semi-markov process and social relationship graph**

4 states: susceptible(S), exposed(E), infected(I) and recovered(R)

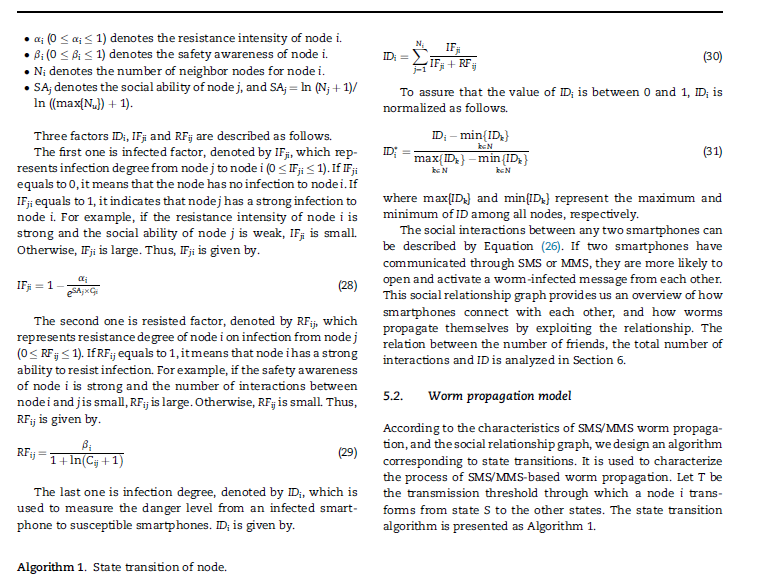
Note the number of 4 states at time t as S(t), E(t), I(t) and R(t) respectively.

pxy denotes the probability of a node transform from state x to state y.

introduce transition probability matrix



Three factors : infected factor, resisted factor and infection degree

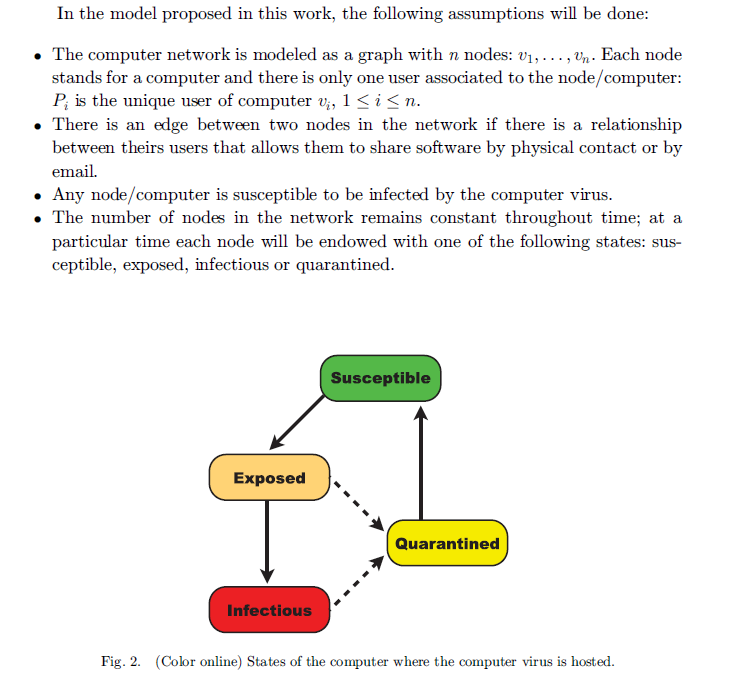


1. **A discrete mathematical model to simulate malware spreading**

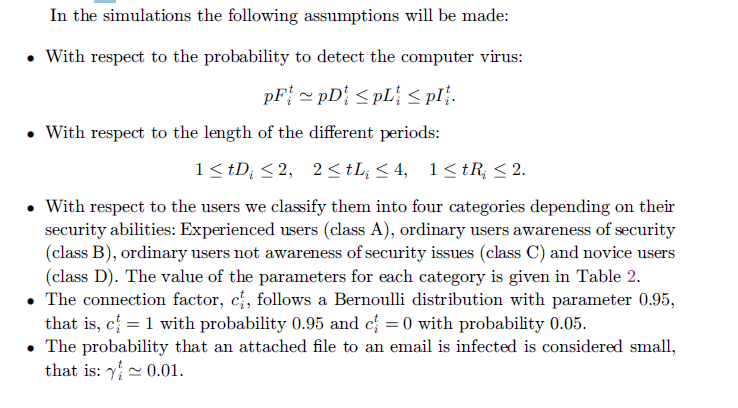
SEIQS model

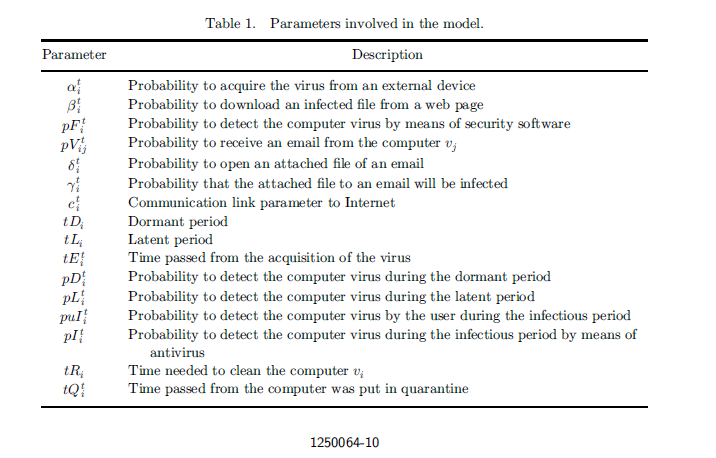
4 states: S(susceptible), E(exposed), Q(quarantined) and I(infectious)

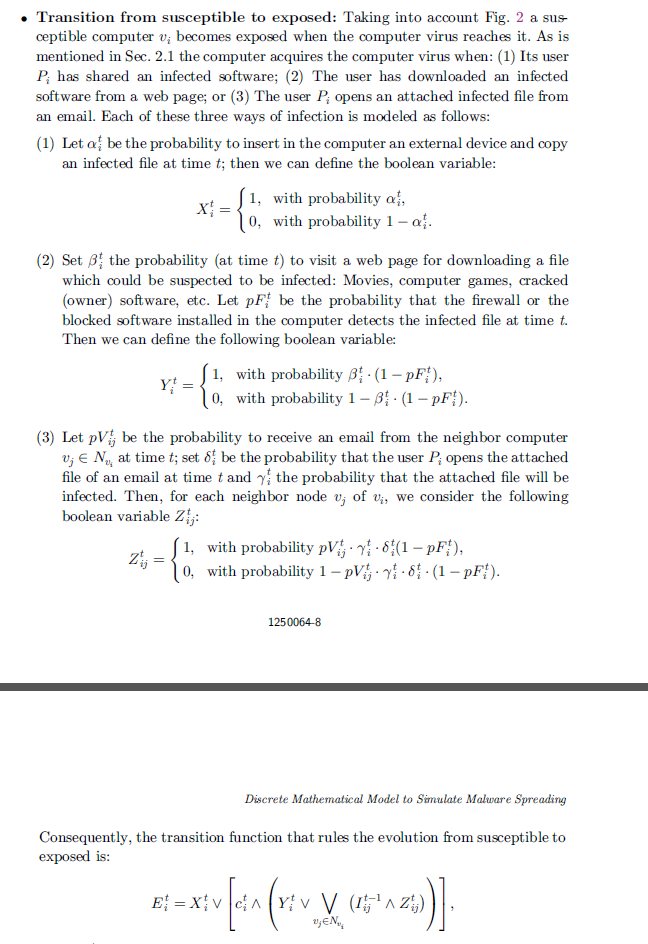
Quarantined computers are those that have been detected as infected by the computer virus and have been removed to be cleaned.

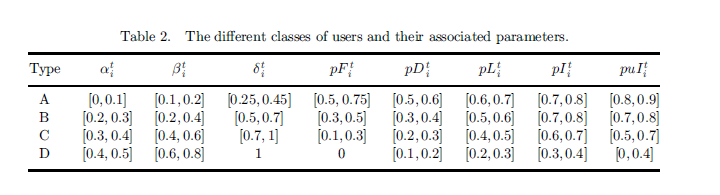


Transition from one state to another one by one.





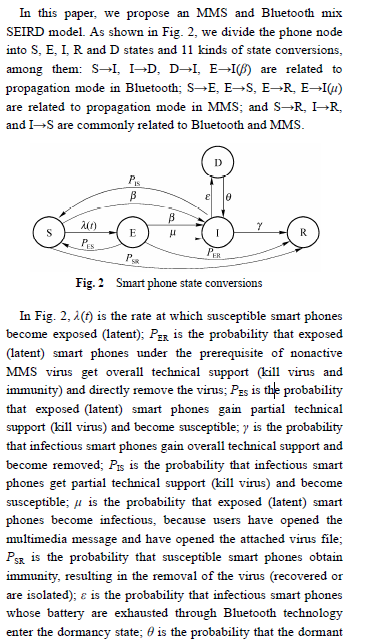
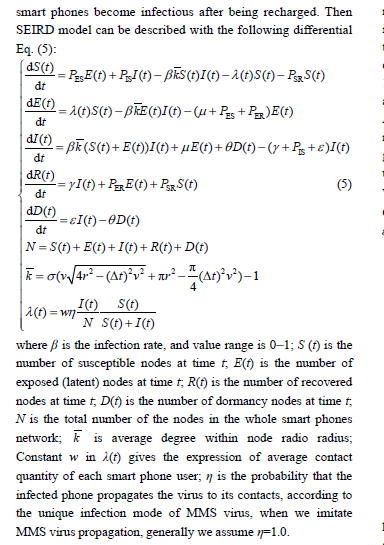




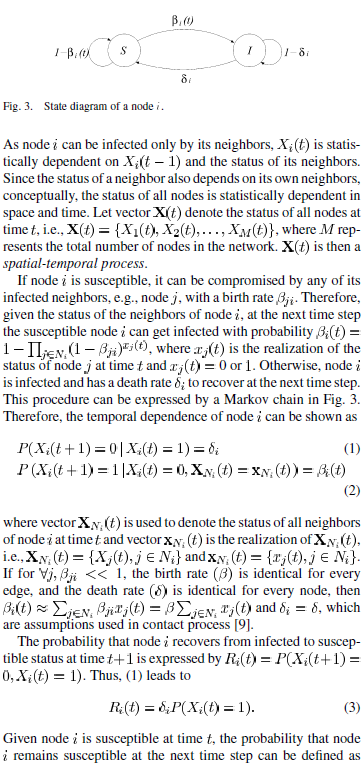
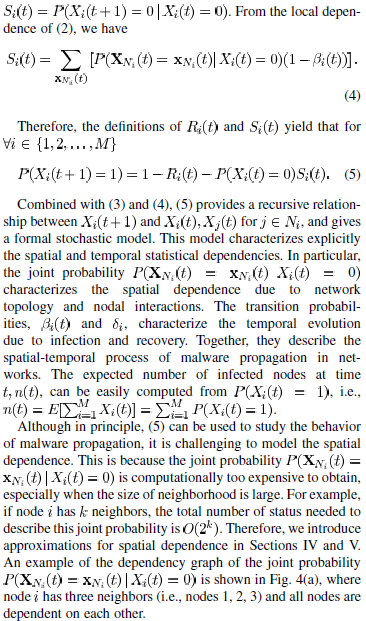
1. **Commwarrior worm propagation model for smart phone networks**

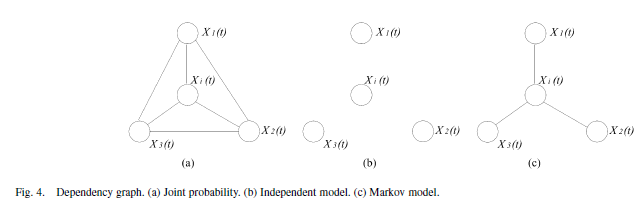
SEIRD model

5 states:



1. **Directed graph-spatial-temporal modeling of malware propagation in networks**

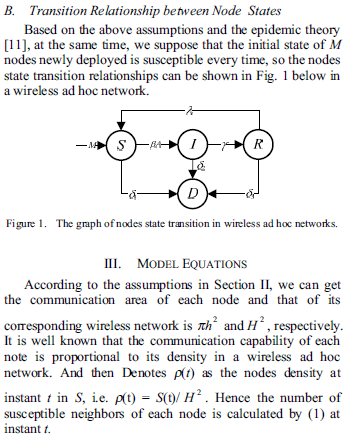
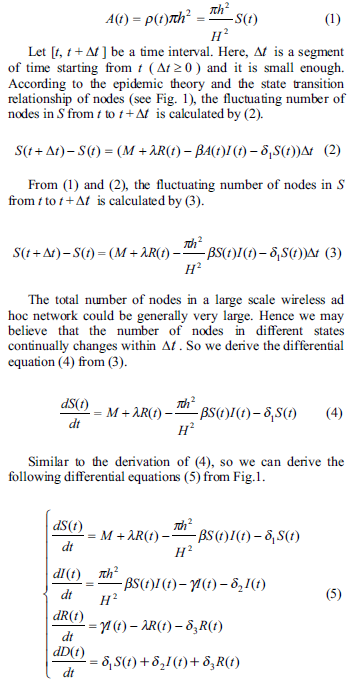
 



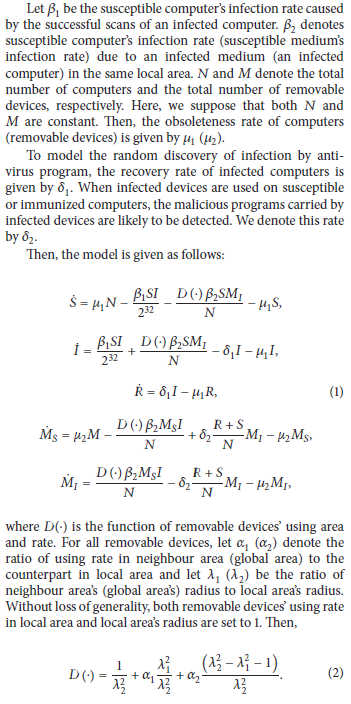
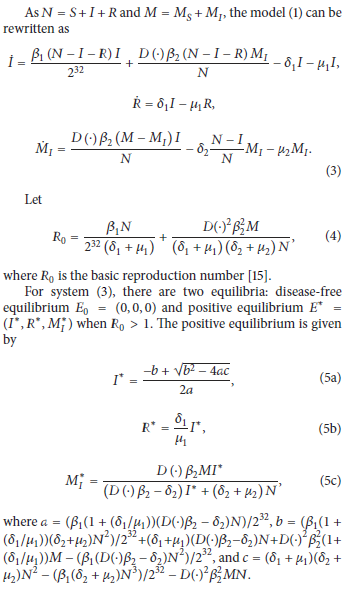
1. **General worm propagation model for wireless ad hoc networks**

4 states: susceptible, infectious, recovered and dead

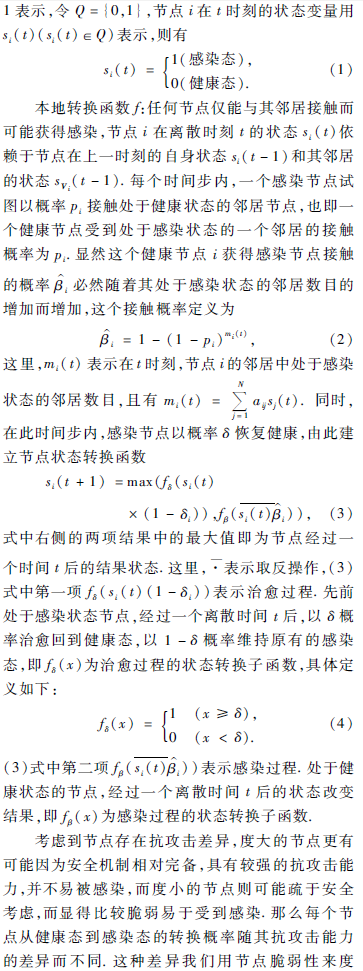
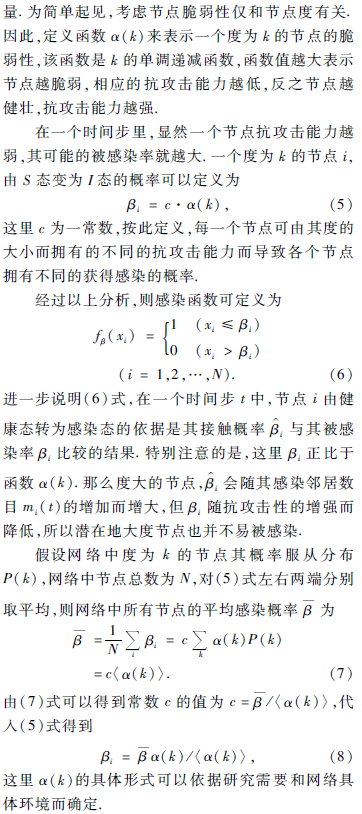
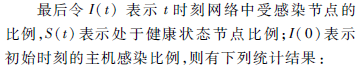
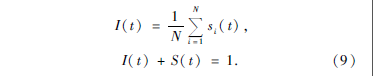
Describe 4 states then give the states transition graph,然后推导出差分方程，最后给出木马在网络中传播的条件，并进行证明。

1. **Influence of removable devices’ heterouse on the propagation of malware**

1. **Malware propagation in scale-free networks for the nodes with different anti-attack abilities**

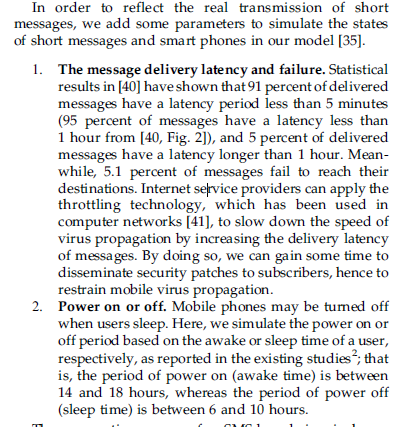
   

1. **Modeling and analysis on the propagation dynamics of modern email malware**

用户check邮箱的时间对传播的影响，模型较为复杂，引入virtual nodes来表示用户收到多个恶意邮件的情况

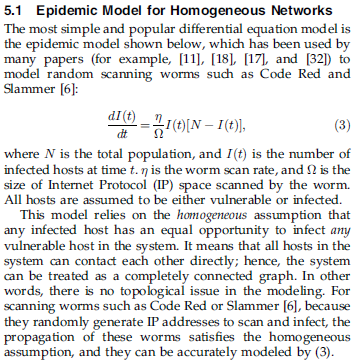
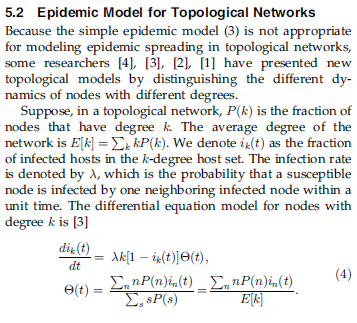
1. **Modeling and restraining mobile virus propagation**

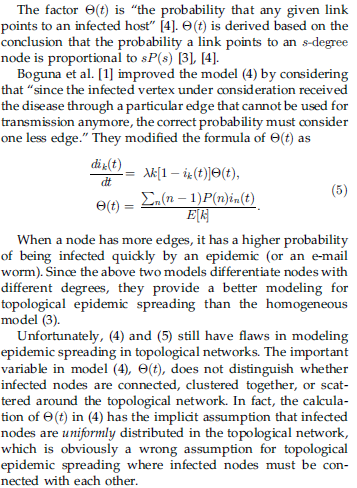
考虑两种情况，消息发送延迟和手机关机开机



1. **Modeling and simulation study of the propagation and defense of internet e-mail worms**

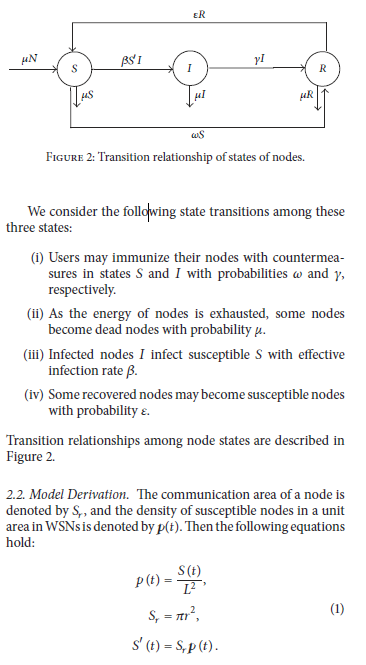
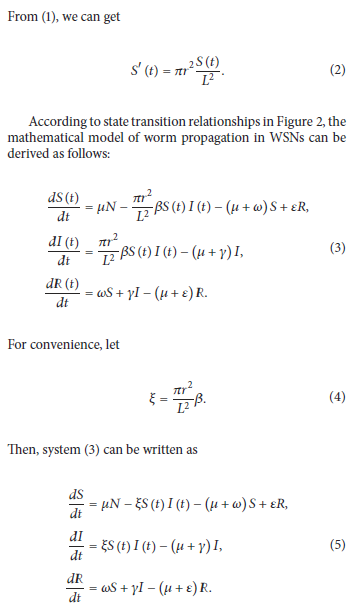
Why differential equation models are not appropriate



1. **Modeling and stability analysis of worm propagation in wireless sensor network**

SIR model

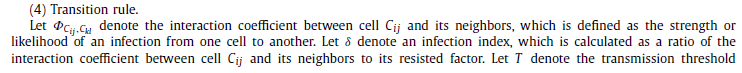
1. **Modeling propagation dynamics of social network worms**

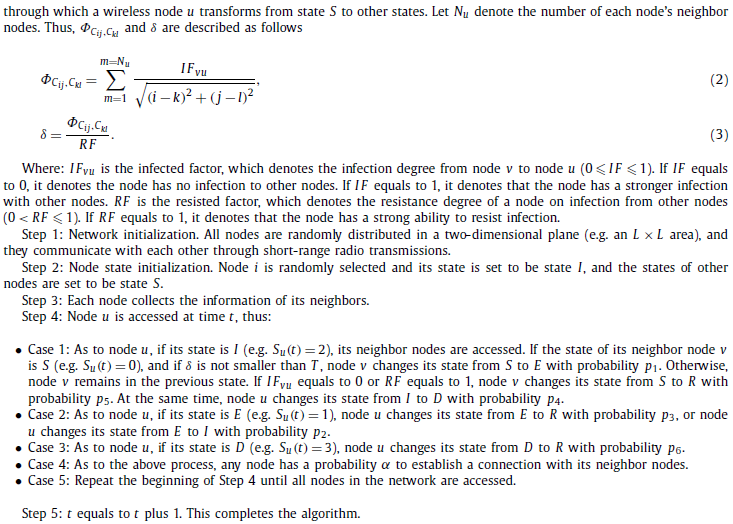
同8 考虑时间特性

1. **Modeling the dynamics of worm propagation using two-dimensional cellular automata in smartphones**

SEIDR模型

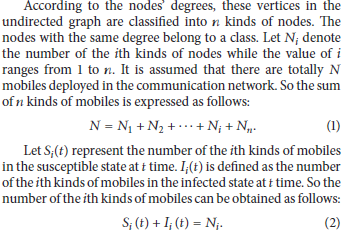
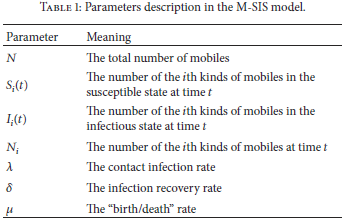
D:Diagonsed, nodes have been diagnosed to be infected by some kind of specific worm

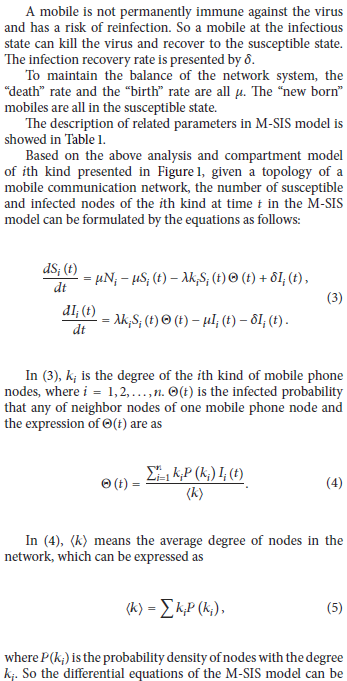
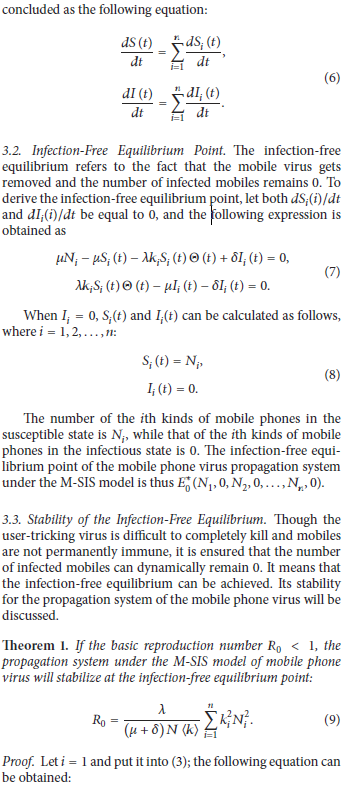




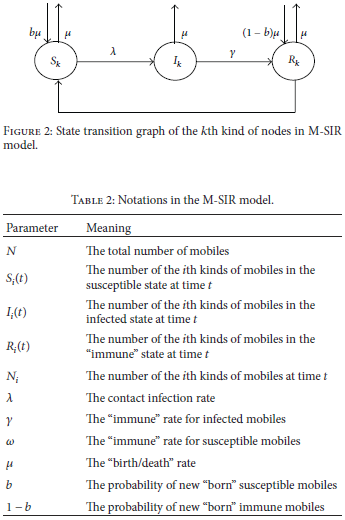
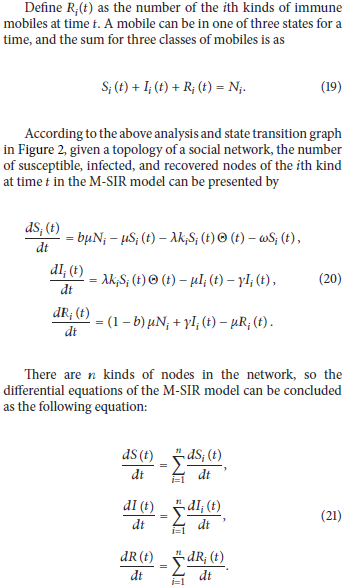
1. **Modeling the propagation of mobile phone virus under complex network**

Modeling the propagation of the user-tricking mobile phone virus---M-SIS model

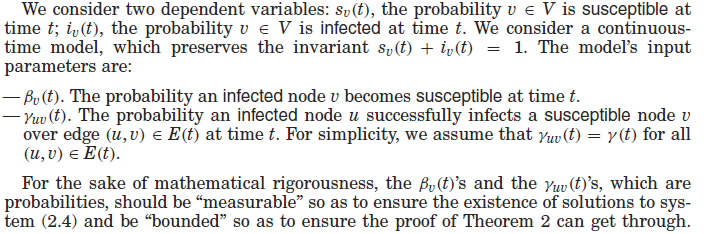
 

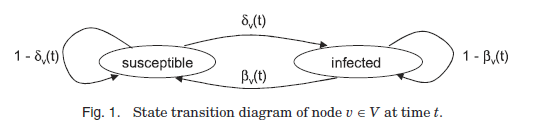
 

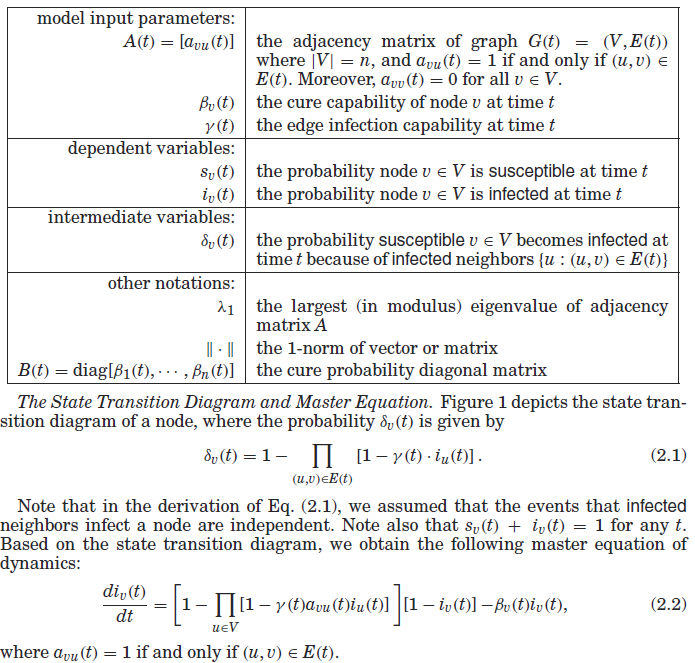
Modeling the propagation of the vulnerability-exploiting mobile phone virus---M-SIR model

1. **Adaptive epidemics dynamics in networks thresholds and control**

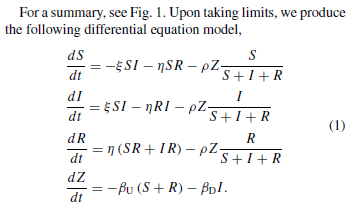




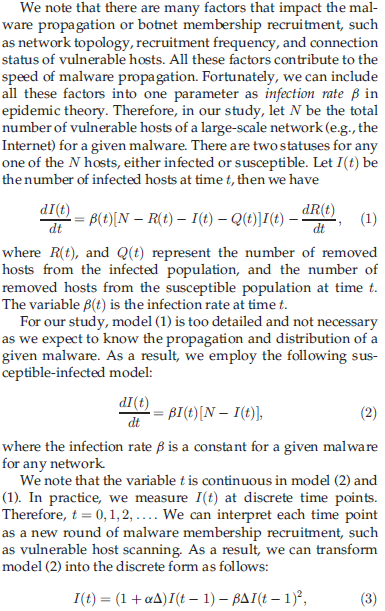
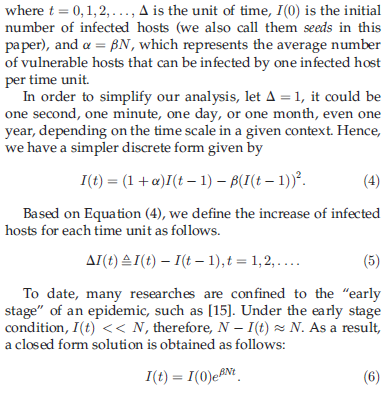


1. **Lanchester for cyber: the mixed epidemic-combat model**

SIR model



1. **Malware propagation in large-scale networks**

1. **Mathematical modeling of the propagation of malware: a review**

描述了各种不同类型的模型和他们的公式

1. **The SIC botnet lifecycle model: A step beyond traditional epidemiological models**

