

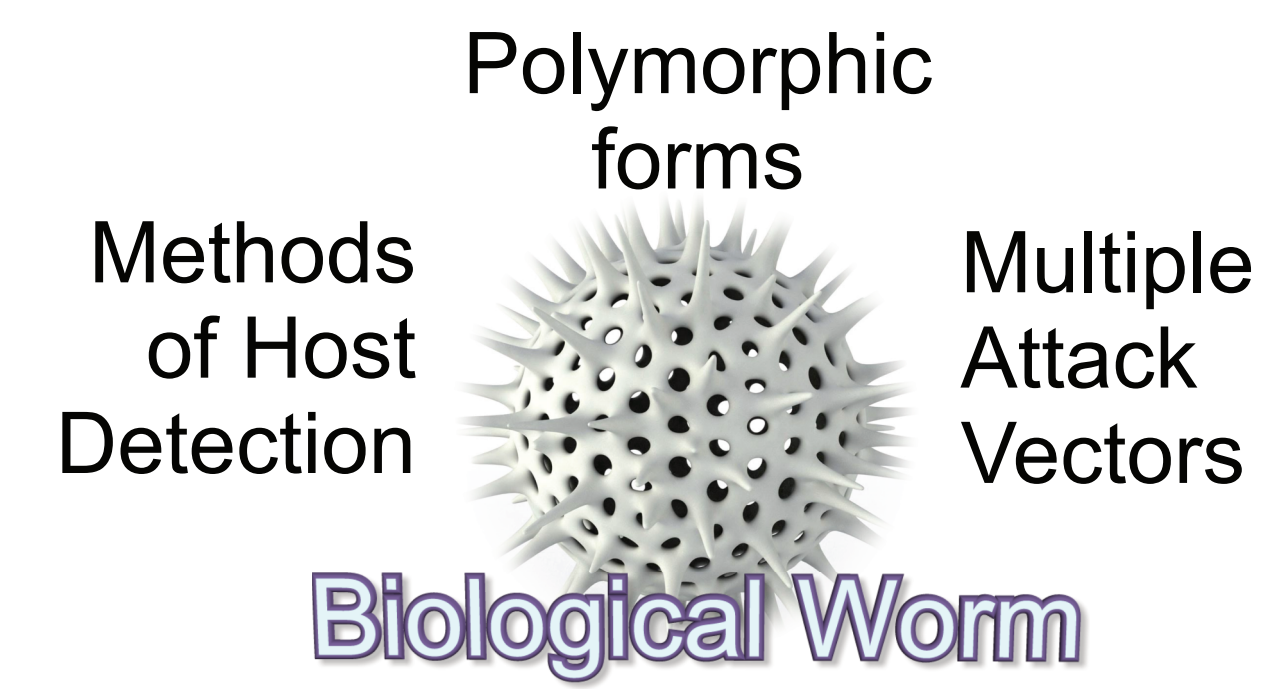
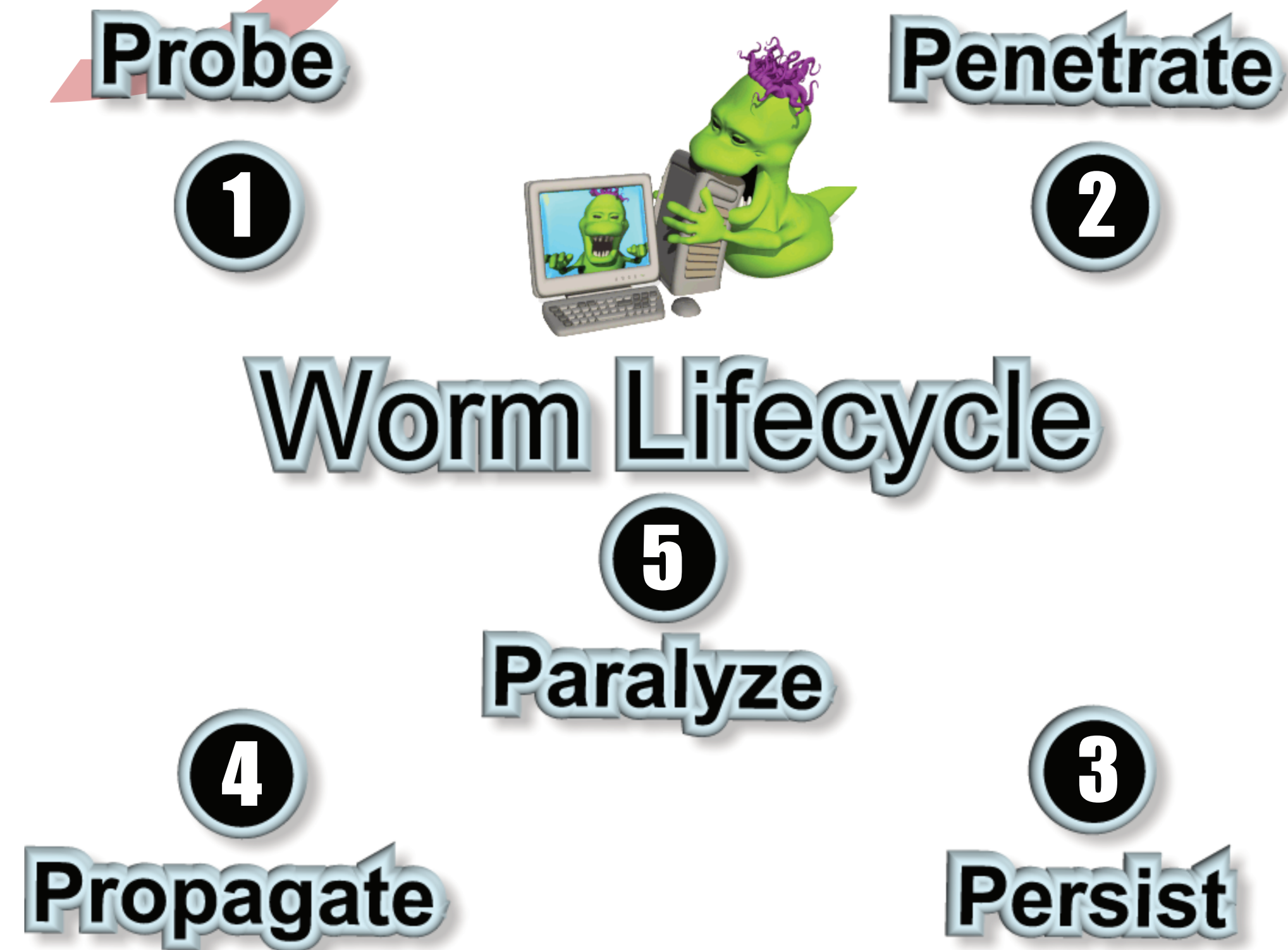


CERIAS

the center for education and research in information assurance and security

1 Background

Worm propagation is severe in wireless networks!



2 Modeling

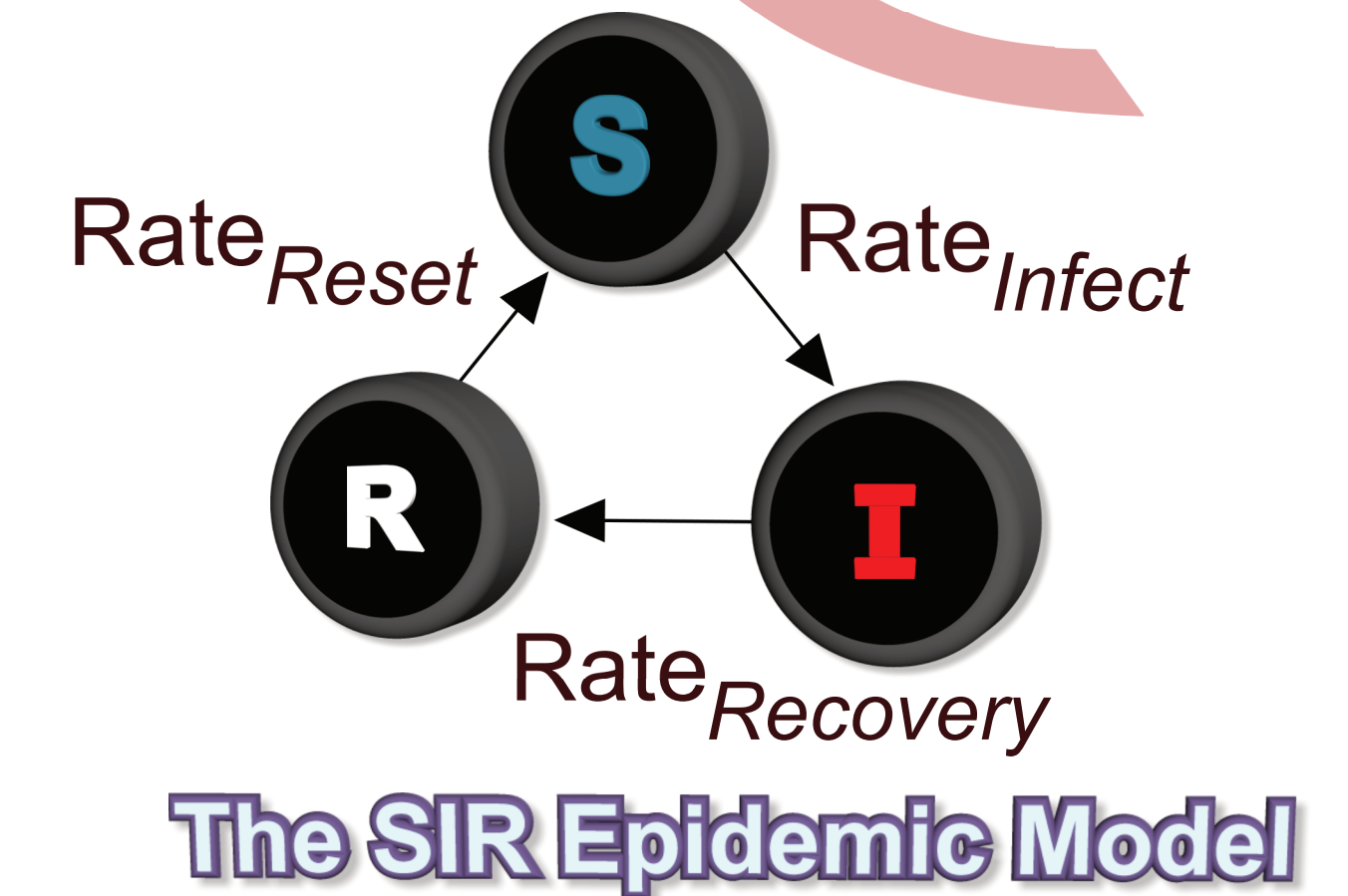
Characterize



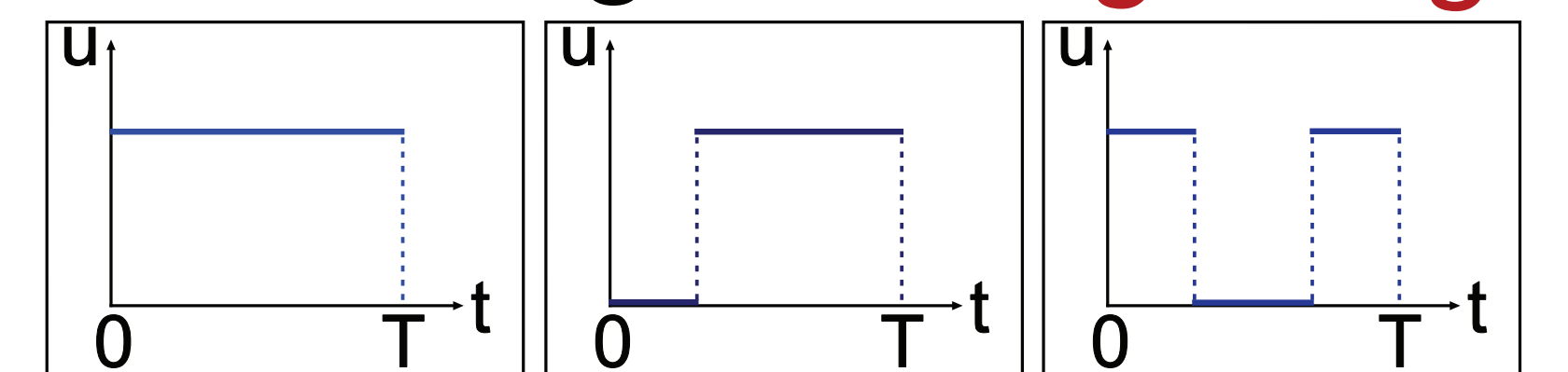
Formulate



Optimize



Tx Range = *bang-bang!*



Infection Quarantining for Wireless Networks Using Power Control

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Discrete Event Simulator
Well accepted
Supports mobility models
Supports 802.11 specs

ns-2

Design

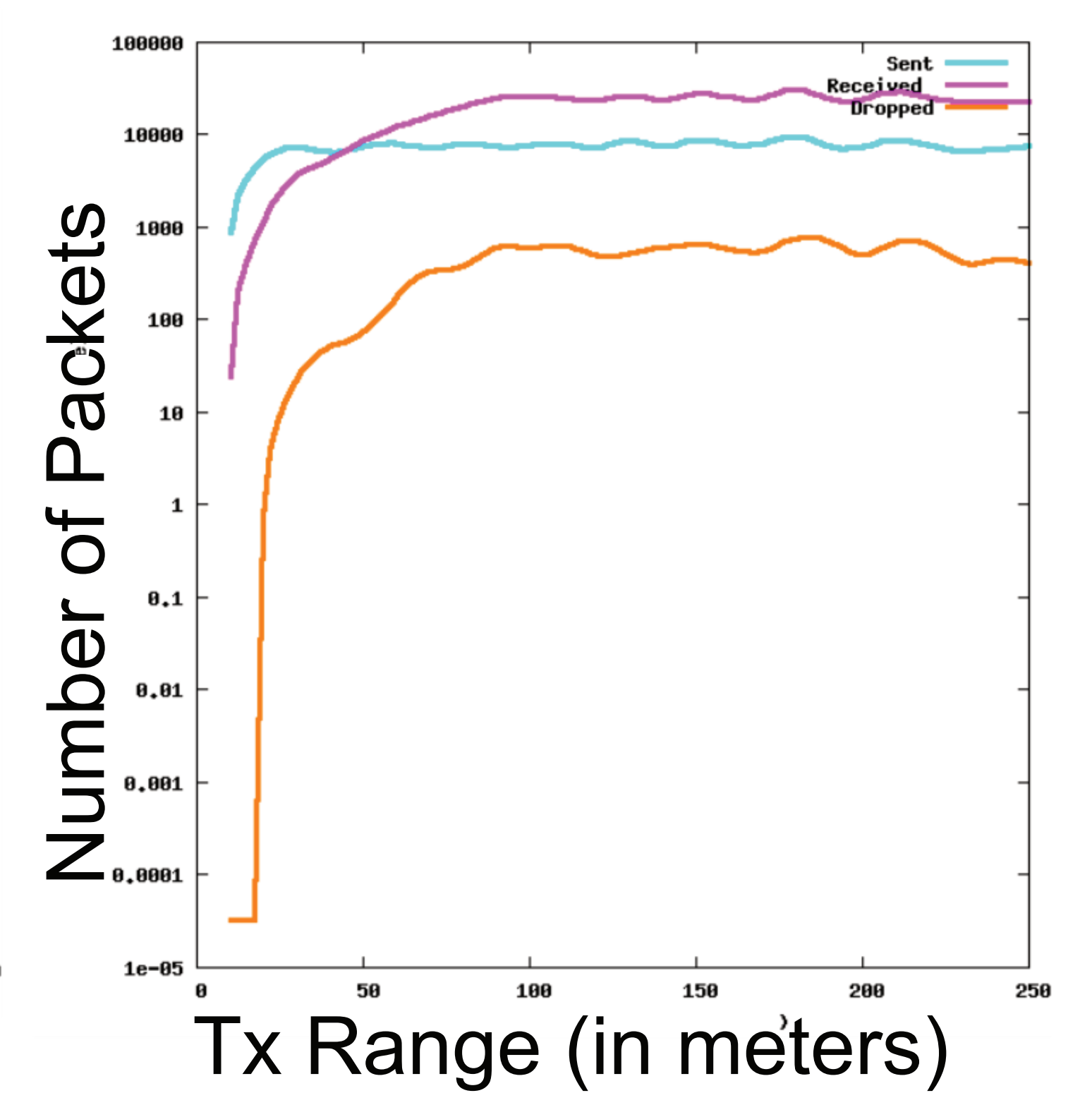
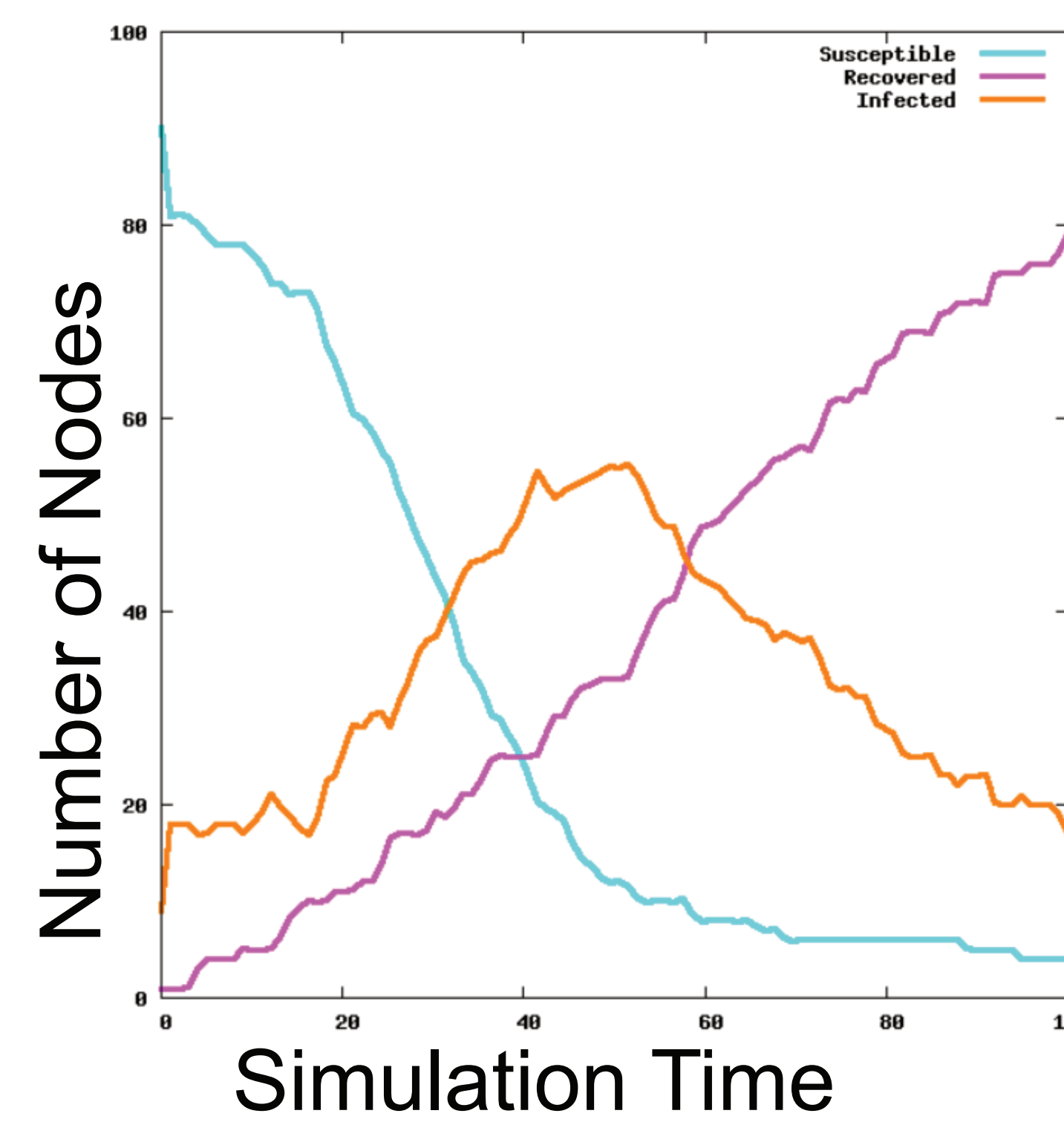


Worm Model

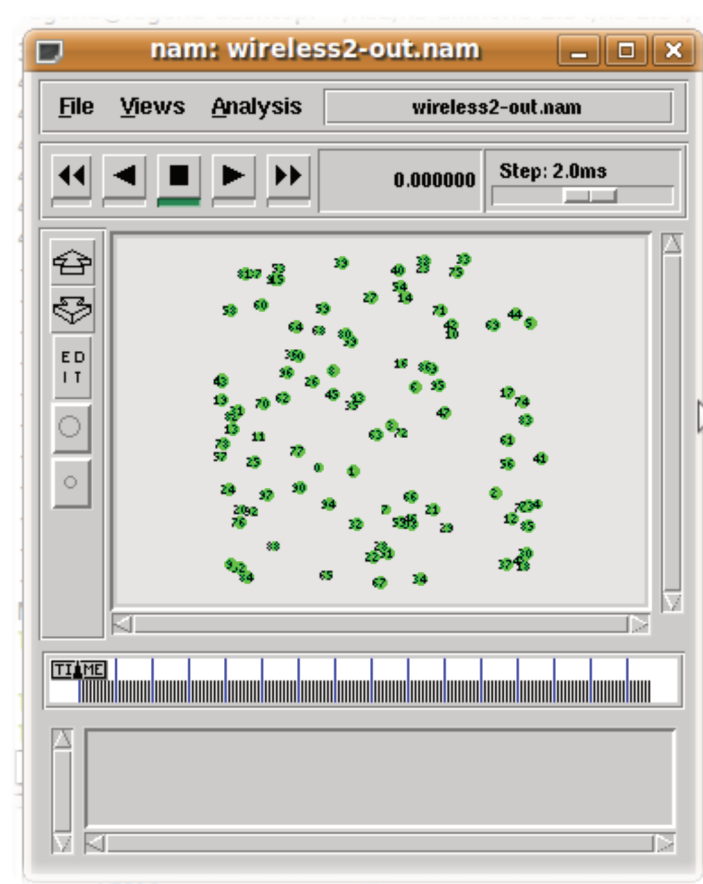


Parametrize

- 'N' Simulation Nodes
- Random Waypoint Mobility
- 802.11 Specs
- Channel Interference
- Tx Range manipulation



3 Approach



next

- Support for Security Patches
- "Healing" Agents
- Generic Defense Protocols
- New Worm Models

4 Results