

# Understanding User Behaviors for Security Enhancement via Computational Cognitive Modeling

## Challenge:

- Asymmetric information between benign and malicious users.
- Imperfect information handling in confusing operating environments.
- Difficult to recognize a user's decision due to cognitive limitations.

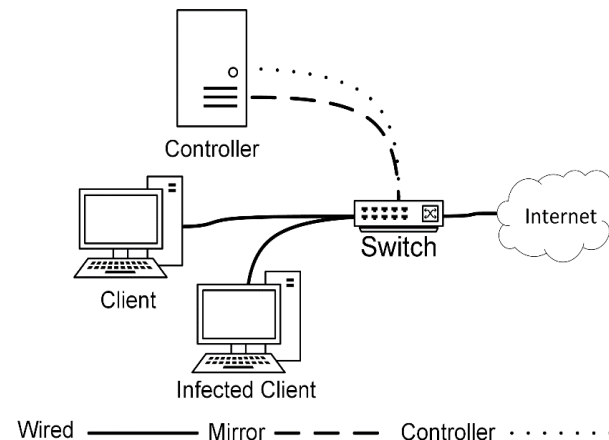


## Scientific Impact:

- Help computer security researchers and software developers to broaden a understanding of threats:
  - Measure security threats and user behaviors.
  - Quantify and analyze various threats.
  - Provide suggestions on security enhancement for differential computer users..

## Solution:

- Explore new computational cognitive user modeling to describe human behaviors in response cyber security threats.
- Build machine-learning approaches to extract malicious features for detection and mitigation.



## Broader Impact:

- Benefit the communities of cybersecurity, networking, and social sciences.
- Help undergraduate and graduate to gain area knowledge and hands-on experimental experience.

Awards:1620862: Computational Cognitive Modeling of User Security and Incentive Behaviors, PI: Kaiqi Xiong Collaborative with JHU.

# Computational Cognitive Modeling of User Security and Incentive Behaviors



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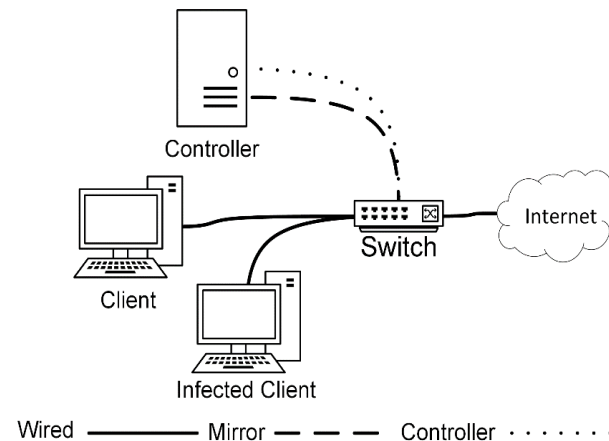


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