Institute for Cyber Security: Research Vision

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MISSION
Sustained excellence in graduate-level sponsored research

2007-2012
Founded by start-up funding from State of Texas

2012-2017
Graduated to a self-sustaining operation

2017-2022
Major expansion by winning NSF C-SPECC grant

- Situated in the College of Science, Department of Computer Science
- Established world class laboratories for: Secure cloud computing and Malware research

In collaboration with:
College of Engineering
College of Business
College of Education
Open Cloud Institute
Cyber Center for Security & Analytics
The cyber-elephant problem requires Applied and Basic research Combined (ABC)
* The New ABCs of Research, Ben Schneiderman, 2016
ICS Major Research Areas

TECHNOLOGIES
- Access Control
- Policy
- Malware
- Detection and Forensics
- Security Dynamics

APPLICATION DOMAINS
- Cloud Computing
- Internet of Things (IoT)
- Social Networks
- Enterprise

Goal: Broaden and Deepen
Cyber Security Landscape

Objectives

Policy

Attacks

Enable
Enforce

What?

Why?

Respond
Defend

How?

Complement

Mechanisms

Protect

Detect

© Ravi Sandhu
Divide and Conquer
Develop point solutions to point problems

Compose and Compensate
Build system level solutions from smaller component solutions

Bright
Shiny
Objects

Hard
Unapproachable
Problems