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Institute for Cyber Security (ICS)  
&  
Center for Security and Privacy Enhanced  
Cloud Computing (C-SPECC)

Ravi Sandhu  
Executive Director

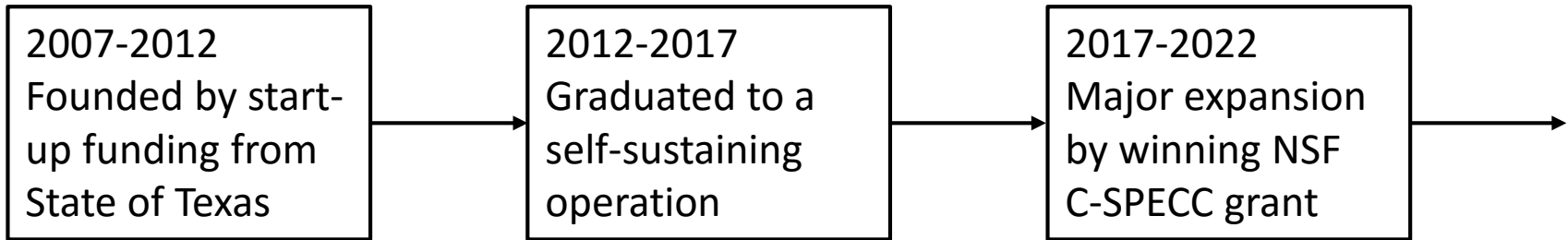
Professor of Computer Science  
Lutcher Brown Chair in Cyber Security

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ravi.sandhu@utsa.edu  
www.ics.utsa.edu  
www.profsandhu.com

## MISSION

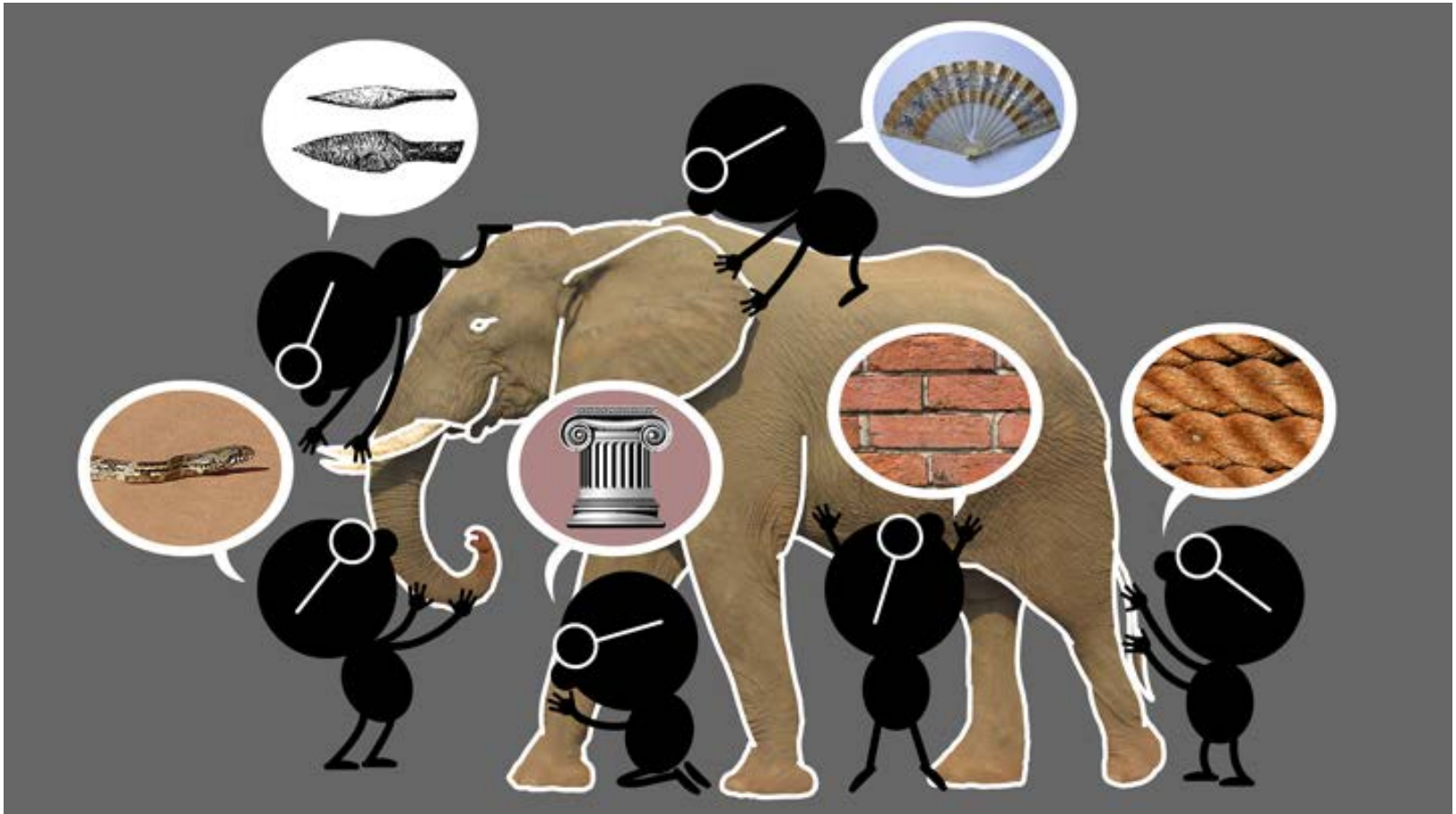
**Sustained excellence in graduate-level sponsored research**



**In collaboration with:**

College of Science  
College of Engineering  
College of Business  
College of Education and  
Human Development  
Open Cloud Institute  
Cyber Center for Security & Analytics

## The Elephant Problem



## The Cyber-Elephant Problem



# Applied and Basic Research Combined (ABC)

\* The New ABCs of Research  
by Ben Schneidman, 2016

- Software:  
Waterfall -> Agile and DevOps
- Security:  
Waterfall -> ???
- Tech transfer:  
Technology Readiness Levels (TRLs) -> ???

## TECHNOLOGIES

- Access Control
- Policy
- Malware
- Security Dynamics

## APPLICATION DOMAINS

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

**Discretionary Access Control  
(DAC), 1970**

**Mandatory Access Control (MAC),  
1970**

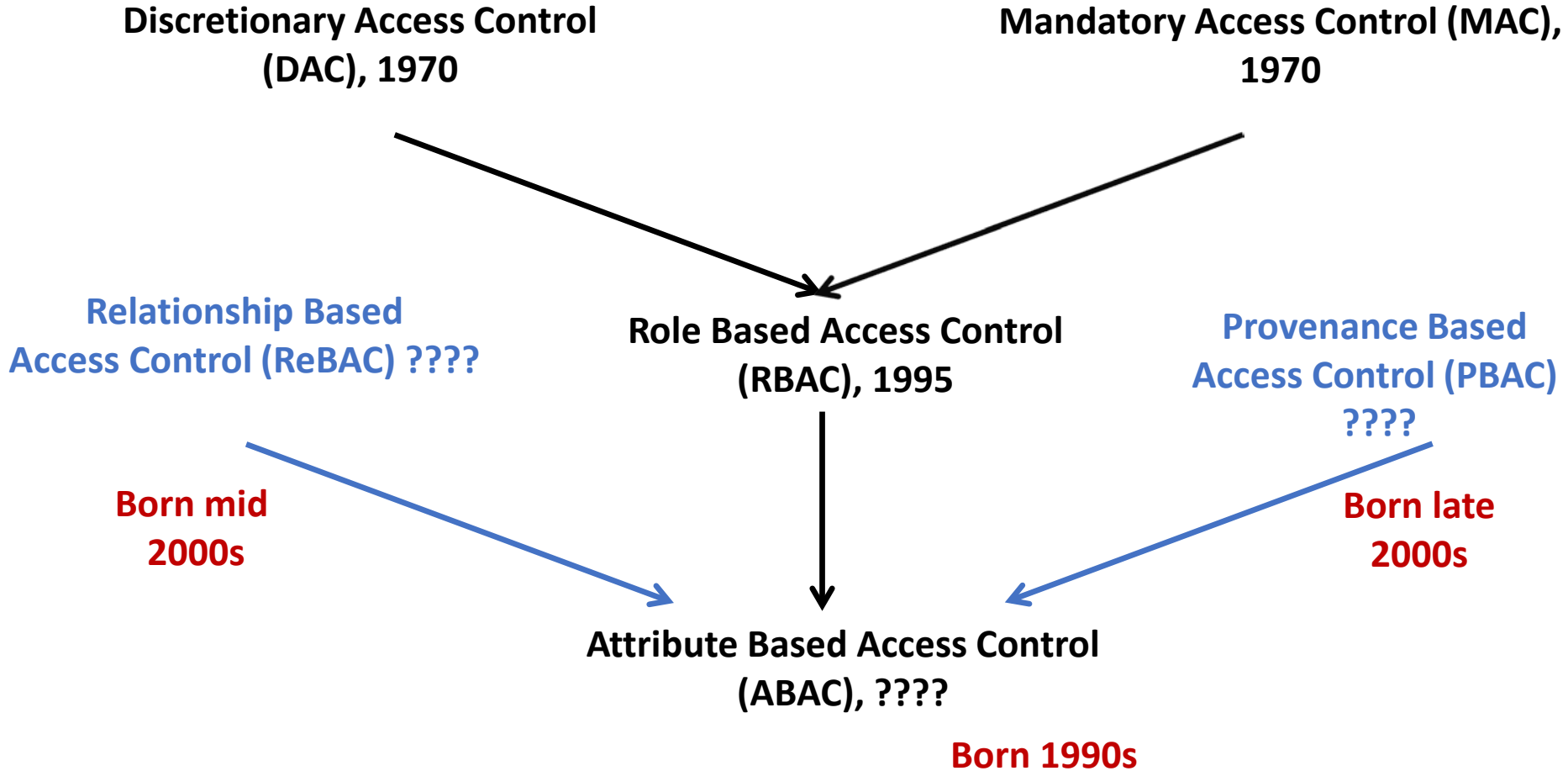


**Role Based Access Control  
(RBAC), 1995**



**Attribute Based Access Control  
(ABAC), ????**

**Born 1990s**





## 7. ABAC Design, Engineering and Applications

5. ABAC  
Policy  
Architectures  
and Languages

3. Administrative  
ABAC Models

4. Extended  
ABAC Models

6. ABAC  
Enforcement  
Architectures

2. Core ABAC Models

## 1. Foundational Principles and Theory

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**ICS and UTSA can dig a lot DEEPER and BROADER**