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I·C·S
The Institute for Cyber Security

C·SPECC
Center for Security and Privacy
Enhanced Cloud Computing

Institute for Cyber Security (ICS)

- **Established**: 2007
- **Mission:** Excellence in PhD-level sponsored research
- **Scope:** All of cyber security (and privacy)
- **Scale:** ≈15 faculty, ≈30 PhD students
- **Multi-disciplinary:** 4 colleges, 7 depts

Career Highlights

- Fellow of ACM, IEEE and AAAS
- Google Scholar citations: 42,000+ total, 8,800+ for RBAC96 paper, 85 h-index
- 31 issued US patents
- Awards from ACM, IEEE, IFIP, NIST, NSA
- Journal/conference leader: ACM, IEEE
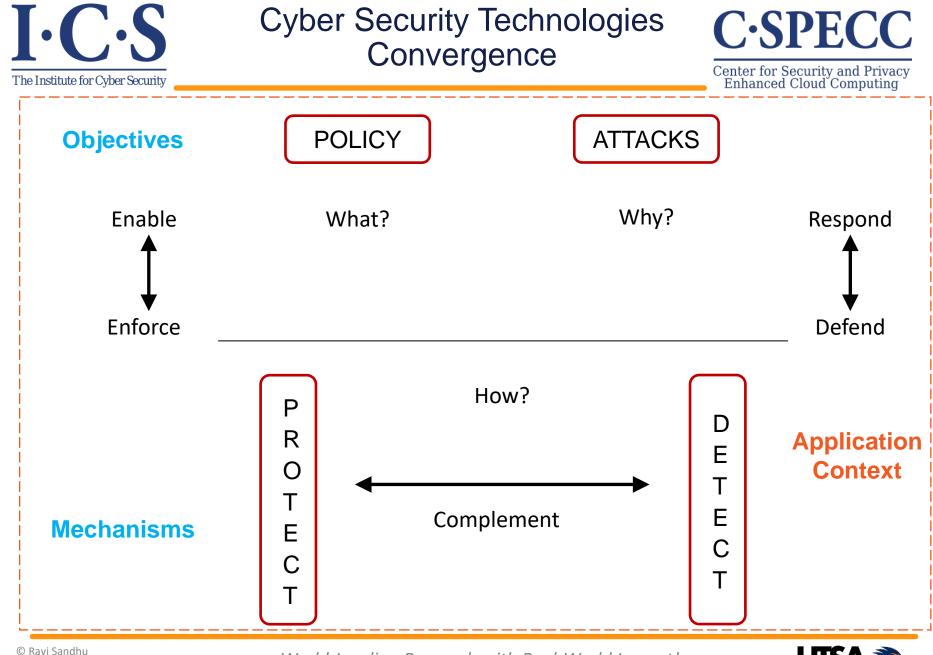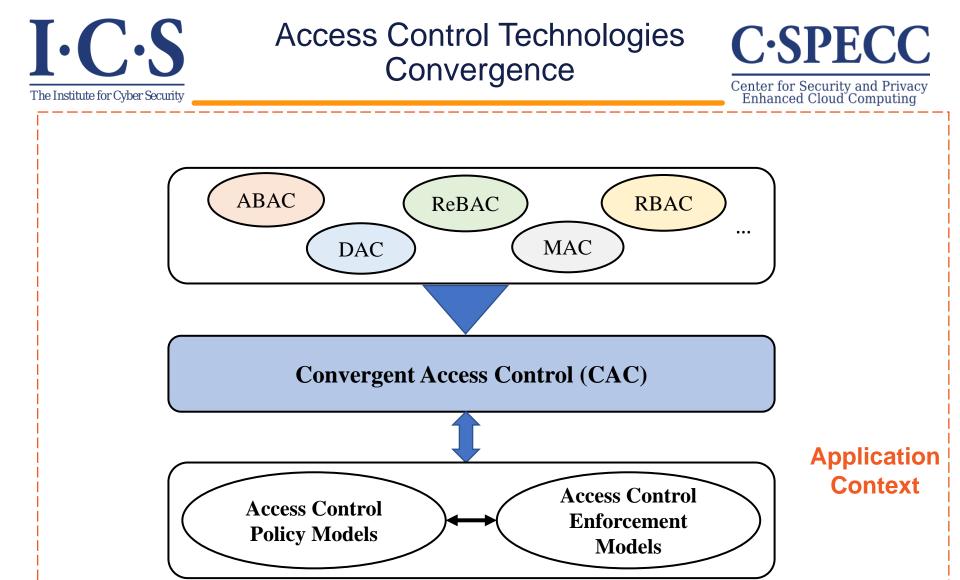
C-SPECC NSF Center

- **Established:** 2017 as part of ICS
- **Mission:** Excellence in secure cloud computing research and education
- **Scope:** All of cloud security (and privacy)
- **Scale:** ≈10 faculty, ≈12 PhD students
- **Multi-disciplinary:** 4 colleges, 5 depts
- **Outreach:** 4 local high schools

Personal Research Highlights

- **Major area:** Access Control and Authorization Models and Systems
- **Current major focus:** Convergence of access control models and systems applied to Cloud, IoT, CPS, Social, etc
- **Ultimate goal:** Convergence of security technologies in application domains

Cyber Security Technologies Convergence

Objectives

POLICY   ATTACKS

Enable   What?   Why?   Respond

Enforce   Defend

How?

Mechanisms

P R O T E C T ← Complement → D E T E C T

Application Context

Access Control Technologies Convergence

ABAC ReBAC RBAC ...
DAC MAC

Convergent Access Control (CAC)

Access Control Policy Models ↔ **Access Control Enforcement Models**

Application Context

World-Leading Research with Real-World Impact!