Intersection of ITS & Cybersecurity: Innovation Opportunities

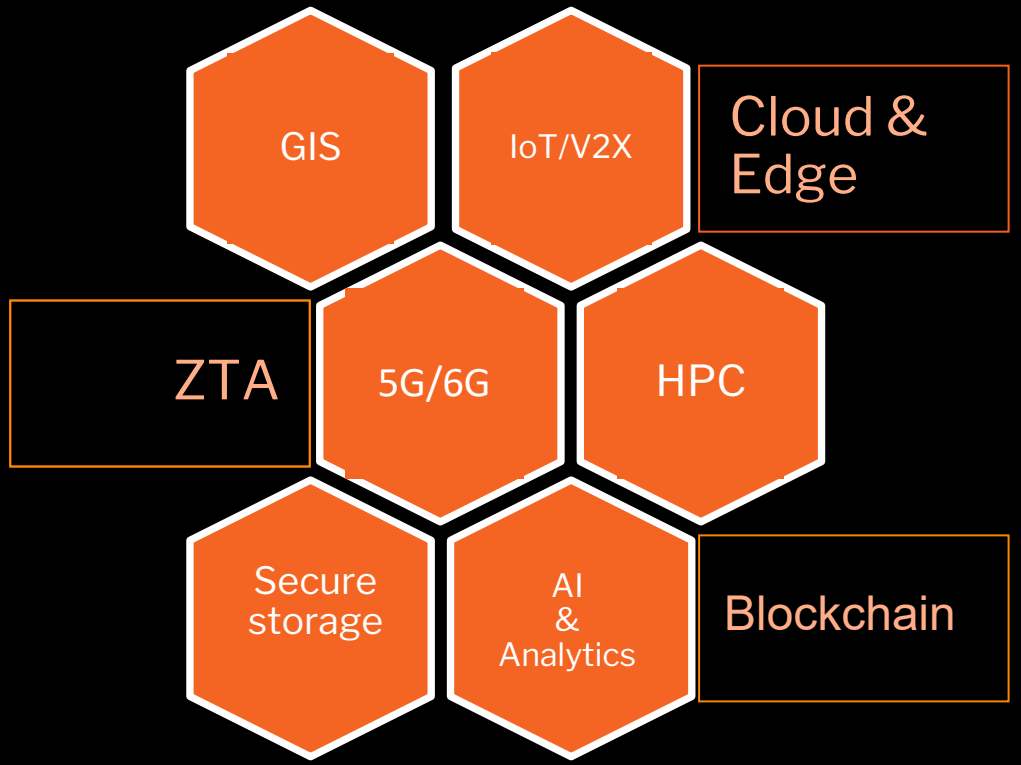
ITS India Congress 2026
Transport + Traffic Infratech Expo

N Subramanian
Society for Electronic Transactions and Security (SETS)
Under the Office of The Principal Scientific Adviser to the Government of India

07 October 2026
Delhi



Innovation Ecosystem



Post Quantum Cryptography Context

Symmetric Key Cryptography

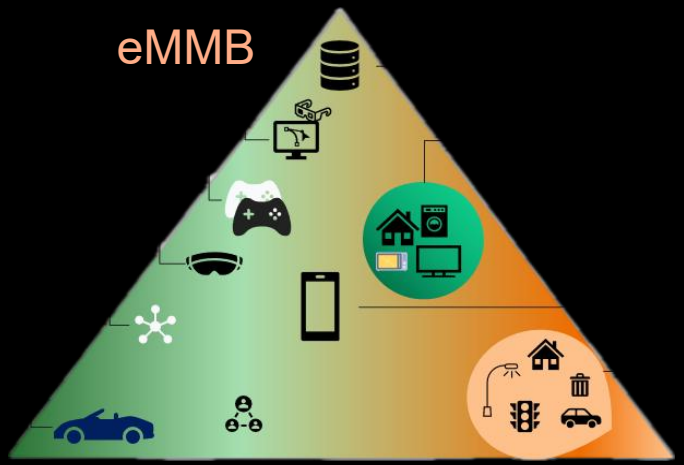
Public Key Cryptography

Authentication

Confidentiality

Integrity

Non-repudiation



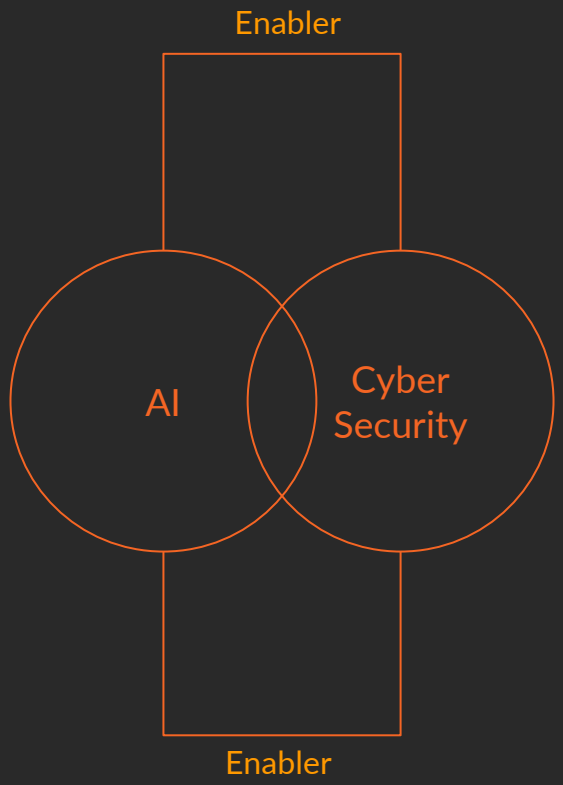


6G will be highly virtualized, cloud-native, and AI-driven, introducing new security challenges.

Non-Terrestrial Networks (NTNs) and Satellite-based systems

Post-quantum cryptographic solutions is crucial for long-term security resilience

AI & Cyber Security



Risk based approaches

- **Data risks**
- **Model risks**
- **Operational risks**
- **Ethical & Legal**

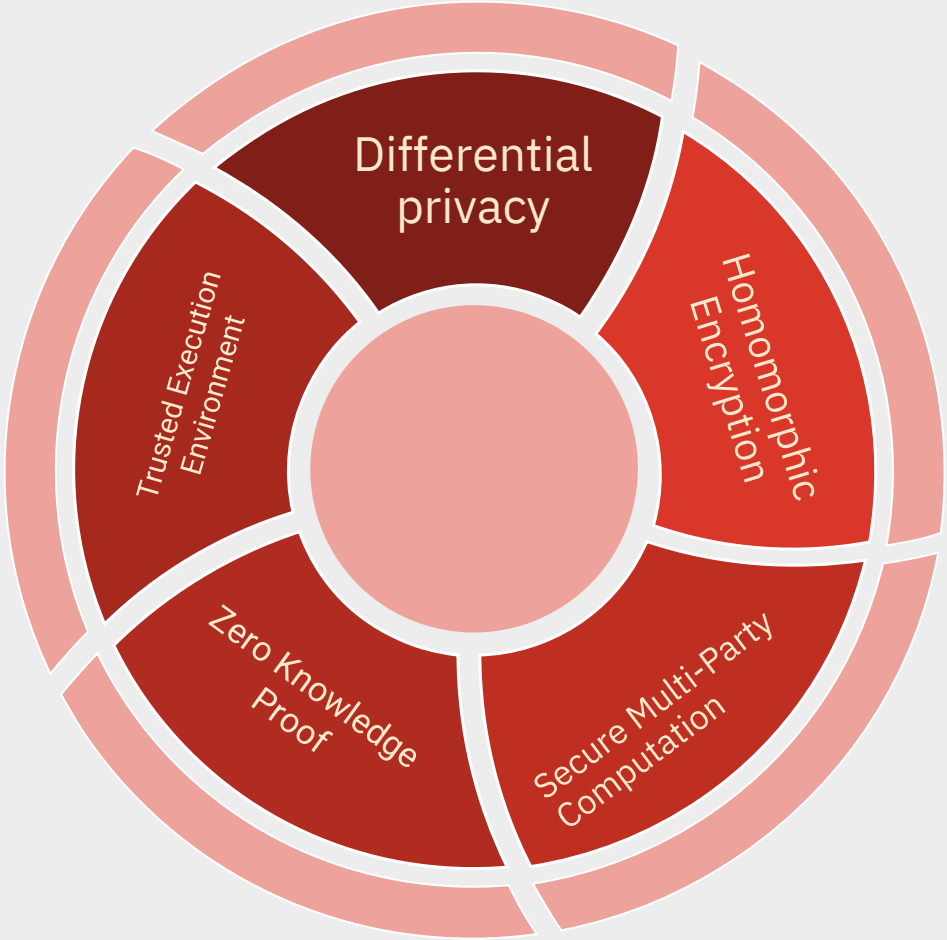
India AI Governance

NIST AI RMF ISO/IEC 42001

IEEE 7000 series, 3128, 2089..

- **Adversarial Attacks**
  - Data poisoning
  - Evasion attacks
  - Model extraction
  - Inference attacks

Privacy Enhancing Techniques



Intersections of ITS & Cybersecurity Opportunities

CONNECTED VEHICLES	IOT, SMART CITIES	STANDARDISATION & TESTING
• Remotely controlled operations • Software and over-the-air updates • Data transfers • HSM / Hardware Security	• PKI/PQC • Certificate formats and encoding • Privacy Enhancing Schemes	• EVITA • NIST/ETSI • SCMS • AUTOSAR

Related activities at SETS

MeitY Supported Initiatives

- PQC based secure boot for RISC-V processor
- PQC CA Solution for IoT environments

Contributions to the National Trust Framework – CCA, MeitY

National Quantum Mission (NQM - DST)

- Lead by IIT Madras, SETS is contributing to Secure Quantum Communication, QKD, KDE and PQC

KEY SOLUTIONS OF SETS

SETS QRNG
Quantum Random Number Generator

SETS-SAAVI
Fast User Identity Online (FIDO2)

SETS Ransomware Analysis as Service
Analysis & identification of ransomware attack

Post Quantum Secure VPN Solution
Secure Communication

SETS Post Quantum Secure Certification Authority (CA)
PKI Suite

SETS-IoT PKI
Securing IoT Ecosystems

SETS Anvayam
FPGA board for side channel evaluation

Thank You

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