

MINI SYMPOSIUM

2026



Professor Ali Safaa Sadiq is an internationally recognised researcher and academic leader in cyber security, trustworthy artificial intelligence, and critical infrastructure protection. As Director of the Cyber Security Research Group at Nottingham Trent University, he leads pioneering research in post-quantum security, cyber-physical systems, autonomous vehicles, and trustworthy AI applications. His distinguished career is marked by more than 150 research publications, over 5,250 citations, and the successful attraction of more than £10 million in external research funding

Professor Ali Safaa Sadiq is recognised in the Stanford Top 2% Scientist list and acknowledged for sustained high-impact scholarship, he continues to advance secure digital innovation and strengthen the resilience of emerging technologies on a global scale.

September 8, 2026

Obuda University-Room F09

MINI SYMPOSIUM 2026

Quantum Risk on the Critical National Infrastructure CNI: Why We Must Act Now

Quantum computing promises transformative capabilities, but it also poses a systemic threat to the cryptographic foundations protecting Critical National Infrastructure (CNI). A cryptographically relevant quantum computer could render widely deployed RSA and elliptic-curve cryptography ineffective, exposing long-lived data, communications, software updates and operational systems. The risk is already present through “harvest now, decrypt later” attacks, whereby adversaries collect encrypted information today for future exploitation. Drawing on recent cyber-physical incidents and the interconnected exposure of energy, government, finance, healthcare and critical communications, this presentation explains why post-quantum preparation cannot be deferred. It examines the UK’s migration milestones towards 2035 and identifies immediate priorities, including establishing cryptographic inventories, prioritising long-lived and difficult-to-replace assets, piloting hybrid post-quantum solutions, engaging technology suppliers and developing governed quantum-readiness roadmaps. The central message is clear: protecting CNI against quantum risk requires coordinated, board-led action now.