CELTIC-NEXT
SPRING CALL 2026
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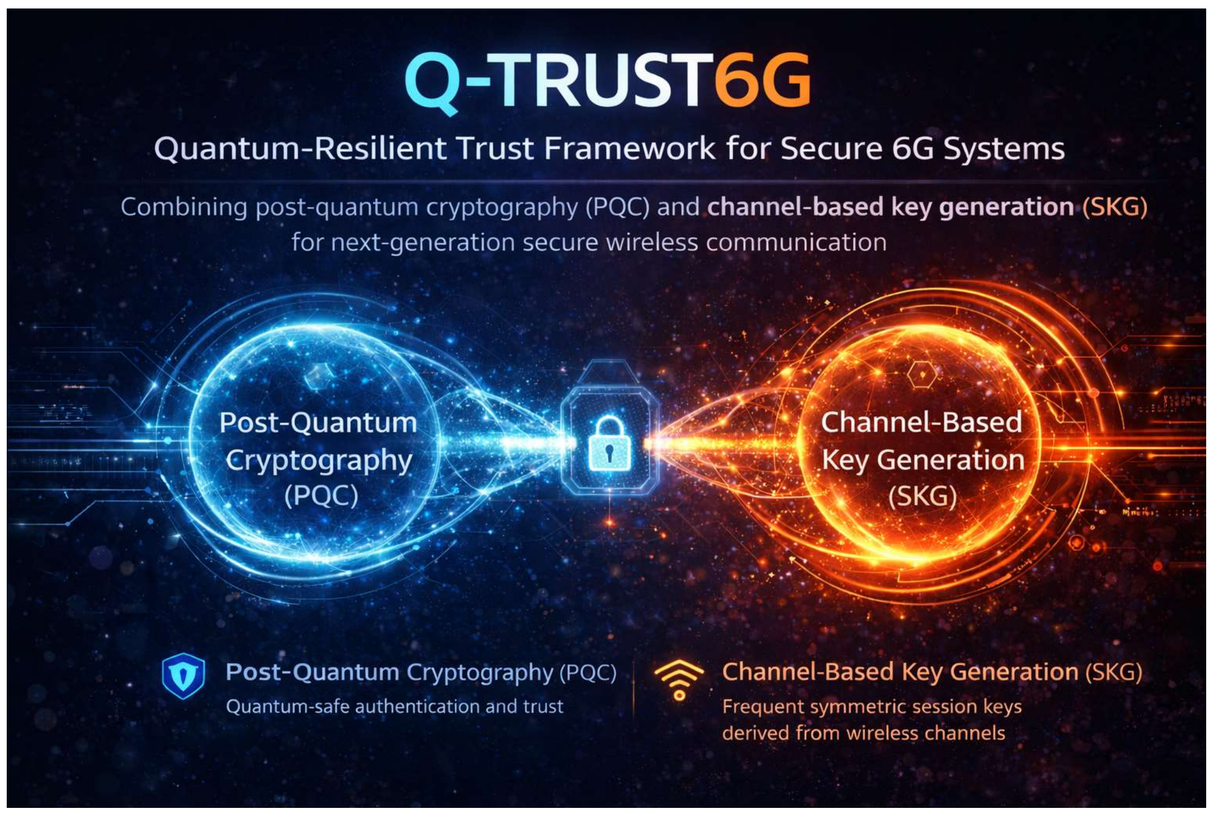
CYBER QUANTA

30 JANUARY 2026 PROPOSERS' BROKERAGE DAY

Q-TRUST6G

Quantum-Resilient **Trust** Framework for Secure **6G**

Q-TRUST6G proposes a hybrid 6G security framework combining post-quantum cryptography (PQC) with channel-based key generation (SKG/CBKG). PQC provides quantum-resilient authentication and long-term device trust, while the wireless channel generates short-lived symmetric session keys for frequent rekeying and real-time traffic protection. The concept will be validated through prototypes and representative testbeds to support future adoption and standardization.



Main Benefit: Delivers quantum-resilient trust and real-time traffic protection for 6G using PQC-based identity assurance and channel-derived short-lived symmetric keys.

Added Value: A two-layer architecture where PQC provides long-term device trust and SKG/CBKG enables frequent channel-based session rekeying.

Why Join: Join to co-develop and validate a hybrid PQC+SKG enabler for 6G, shaping future architectures and standardization.

Consortium Members

- Cyber Quanta (SME), ULAK Haberleşme (IND), MEDIPOL University (ACAD) / **Türkiye**;
- Open Radio Systems (SME), PHYSEC GmbH (SME), TU Dortmund University (ACAD) / **Germany**;
- Linköping University, (ACAD) / **Sweden**;
- Brno University of Technology (ACAD) / **Czech Republic**;

Looking For Partners With Expertise In:

- We are looking for dedicated SMEs working on 6G security, together with partners experienced in channel-based key generation and real network validation
- Dedicated SME (EU): Active R&D on 6G Security and secure wireless systems
- SME / Academia: Expertise in Channel-Based Key Generation (CKG) and physical-layer key agreement
- Industry / Research Labs: 6G laboratory and testbed capabilities and Advanced simulation and emulation infrastructures
- Network Operator: Real network integration and field validation in operational environments

Contact

Dr. Faruk SARI, Cyber Quanta
faruk.sari@cyber-quanta.com
+90 216 212 55 40
www.cyber-quanta.com