

Scaling quantum secure networks with Q*Bird's MDI-QKD

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As quantum technologies advance, transitioning from research prototypes to operational networks is critical to safeguarding sensitive communications and critical infrastructure. In this session, explore the deployment and operationalisation of Measurement-Device-Independent Quantum Key Distribution (MDI-QKD) networks. Gain insights into how multi-node, entanglement-based quantum networks can integrate with existing telecom and fiber infrastructure, providing scalable, interoperable and future-proof security against both classical and quantum-enabled cyber threats. Real-world deployments across Europe, including metropolitan and cross-border networks, will be discussed, demonstrating the practical application of quantum secure communication today.

Furthermore, the session will also explore how these architectures contribute to the development of technologies that enable the future quantum internet, including connectivity solutions for quantum processors, quantum modems and distributed quantum sensors