

# Welcome

## Dynamic QKD network over the 5GUK testbed 'QKD over 5GUK'

The University of Bristol and Quantum Communications Hub warmly invite you to celebrate a demonstration of the first 5GUK Test Network secured by dynamic quantum key distribution (QKD), sharing keys over core, metro and access networks.

QKD allows a new approach to symmetric encryption by enabling users to generate shared, truly random symmetric keys from different locations on a network. It is a proven concept that is being advanced by the Communications Hub to a commercialisation-ready stage.

The core work of the 'QKD over 5GUK' event involves two research groups within the University of Bristol, the Quantum Engineering Technology Labs and Smart Internet Lab. Using open source software developed by the researchers, we will demonstrate how QKD can be incorporated into a classical network structure and anticipate how the application will lead to improved UK infrastructure and device interoperability on a national scale.

Quantum technology is one of the most exciting and dynamic areas of modern research. We hope you will enjoy the day and we welcome discussion on how we can work with industry to test quantum secured future network services and applications.

Yours,  
**Prof. John Rarity FRS and Prof. Reza Nejabati**



# Agenda

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10:30-11:00	Registration and coffee
11:00-11:15	Welcome, safety announcements and event introduction
11:15-11:25	Quantum Communications Hub
11:25-11:35	Introduction to Quantum Security Capabilities in 5GUK Test Networks
11:35-12:05	Demo 1: Software Defined Multidomain Quantum Secured Network Field Trial
12:05-12:35	Demo 2: Fully meshed dynamically switched QKD Metro network
12:35-12:40	Interactive demonstration preview
12:40-14:00	Lunch and networking
14:00-14:30	Demo 3: Practical Handheld QKD
14:30-15:00	KETS Quantum Secured Technology
15:00-15:05	Closing remarks
15:05-16:00	Networking with tea and cake Optional lab tours

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This event will be live-tweeted. We invite you to interact with us on Twitter @QETLabsBristol, @bristol\_smart and @QCommHub using the event tag #QKDOVER5GUK.

This event will be photographed and filmed for online and promotional purposes. Please inform a member of the Registration team if you do not consent.