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QUANTUM COMMUNICATIONS HUB

Welcome to the EPSRC Quantum Communications Hub Newsletter!

Hi there, welcome to the EPSRC Quantum Communications Hub Quarterly Newsletter. Here you can keep up to date with the latest news, events and opportunities associated with the Hub!

HUB EVENT: Next Generation Quantum Networking: Applications, Use cases, Architectures and Technologies

29-30 April 2021, online

This workshop aims to bring together researchers from UK's Quantum Communication Hub programme and similar initiatives across the world to discuss technological challenges and solutions for creating the next generation of quantum communication networks featuring enhanced operational capabilities to address the requirements for a variety of applications and use cases including quantum key distribution, the quantum internet, blind and distributed quantum computing.

Registration is now open and the event programme can be seen via the link below.

Find out more

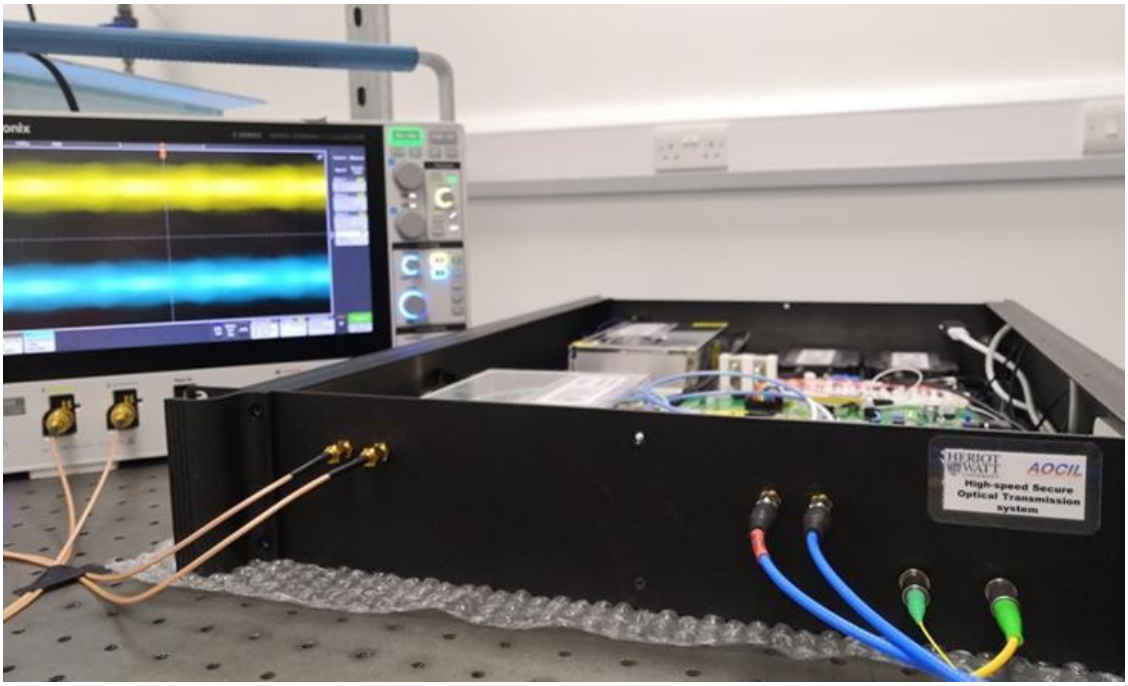
Networks Workshop 2021

Enhancing network security with “plug-and-play” security system

A new project aiming to enhance network security by developing and trialling a fully integrated security system has been awarded Partnership Resource funding by the Quantum Communications Hub.

The project, which is led by researchers based at Heriot Watt University and involves Hub partners the University of Cambridge and BT, will develop an integrated QKD and optical code scrambling system, enabling quantum level security in the key exchange and physical level security in data transmission. This new system will enable ultra-high security while maintaining high data transmission rates. The prototype system will be tested in a series of field trials on the UK Quantum Network, to determine the robustness of its performance. The ultimate goal is to successfully apply such systems to a range of higher data-rate optical communication scenarios in the future.

Find out more

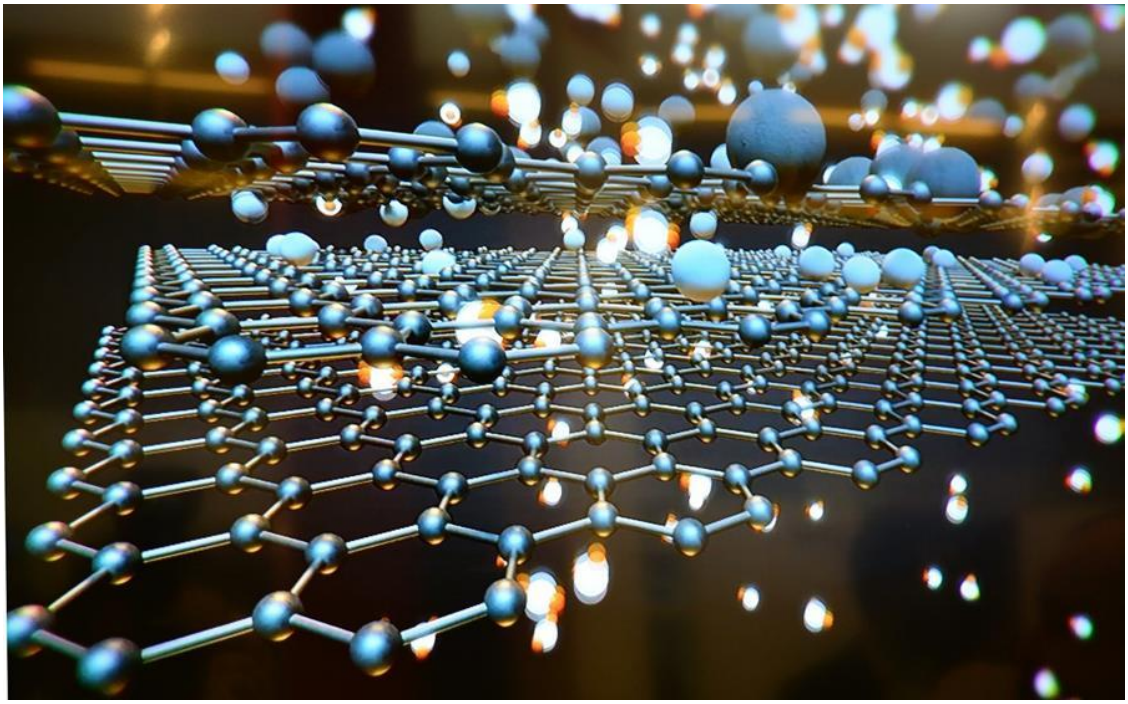


Hub funds project to develop prototype single-photon source

A collaborative project which aims to create a prototype single-photon source for integration within high performance photonic devices has been awarded Partnership Resource funding by the Quantum Communications Hub.

The project will be led by researchers at the University of Exeter who will collaborate with leading quantum photonics start-up AegiQ. The team plan to develop a high-efficiency, high-repetition rate, single-photon source prototype, through the integration of hBN with silicon nitride based nanophotonics.

Find out more



The next round of Hub Partnership Resource funding opens soon!

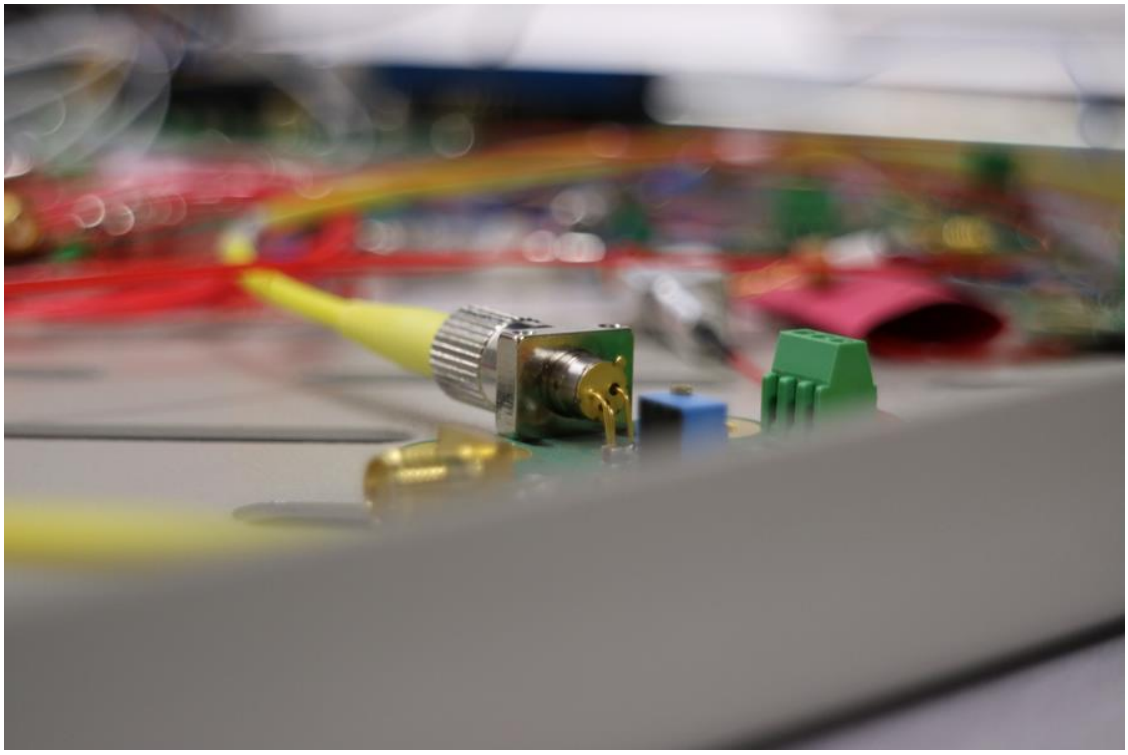
Opening: 6 April 2021 Deadline: 12pm, 8 June 2021

The Quantum Communications Hub is pleased to announce a new round of Partnership Resource funding, which aims to support new collaborations that are closely aligned with the work of the Hub.

The vision of the Quantum Communications Hub, which is funded through the UK National Quantum Technologies Programme, is to deliver integrated secure quantum communications at all distance scales. The Hub intends to do this by developing existing prototype quantum secure technologies beyond their current limitations; to thus contribute to the establishment of quantum communications technology industries in the UK; and to feed their future expansion, competitiveness, diversification and sustainability.

Proposals which would fall under the scope of this fund may include: feasibility studies, proof of concepts, preliminary developments and demonstrators. The Hub is also keen to support activities that may seed future work in research, R&D and innovation (e.g. Industrial Strategy Challenge Fund proposals). Some examples of projects previously funded can be explored on the Collaboration Opportunities section of the Hub website.

Further details on the scope of the fund and application requirements can be found in the submission guidelines. Any interested parties are encouraged to contact the Hub's Business Development Manager (Klitos Andrea – klitos.andrea@york.ac.uk) for a preliminary discussion in the first instance.



Commercialising Quantum Technologies: CRD & Tech funding competition now open

UK Research and Innovation has launched it's second round of Commercialising Quantum Technologies: CRD & Tech funding. The competition is funded through the Industrial Strategy Challenge Fund for commercialising quantum technologies. UK registered businesses can apply for a share of up to £46.8 million for collaborative research and development or technology projects in quantum.

Projects must exploit second generation quantum techniques and focus on one or more of the following themes:

1. Connectivity: techniques for securing data in storage and in flight.
2. Situational awareness: including sensors and detectors for the built environment, transport and infrastructure. Imaging and sensing to "see things currently invisible".
3. Computing: transformational computers for solving currently intractable problems.

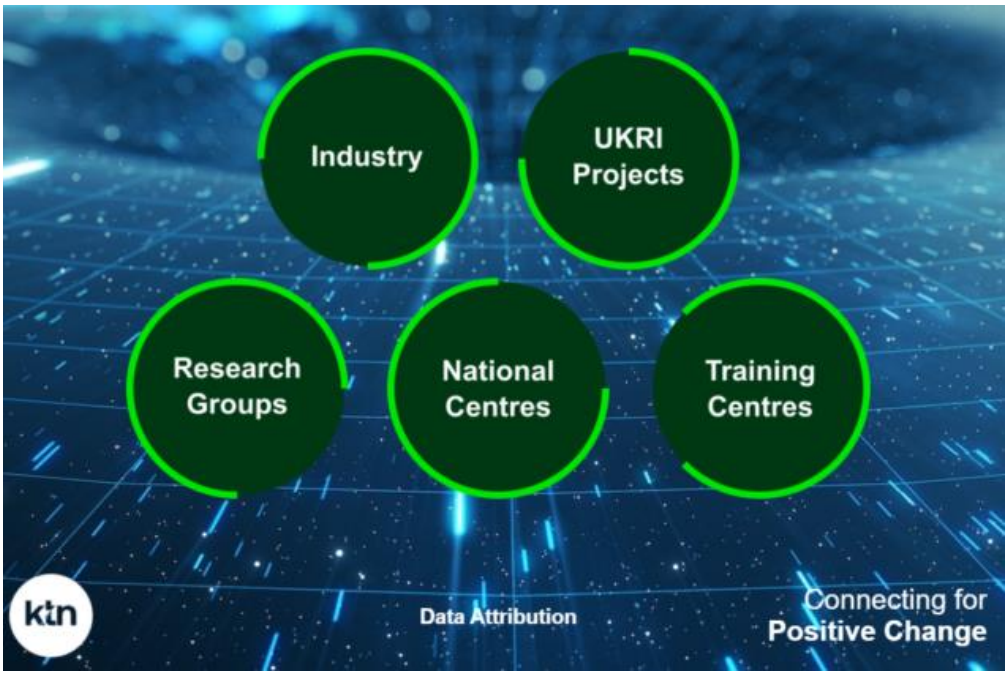
If you have an idea for a collaborative proposal with Hub partners, please feel free to contact the Hub's Business Development Manager (Klitos Andrea – klitos.andrea@york.ac.uk) to discuss this further.

Find out more

UK Quantum Landscape

The Knowledge Transfer Network (KTN) has recently updated their Quantum Landscape tool which is interactive, searchable and open access. The tool maps quantum investment and expertise within the UK and includes businesses, research groups, projects funded through UK Research and Innovation (UKRI), UK national centres and postgraduate training centres and is intended to be used as a point of reference for quantum capabilities in the UK. To view the updated Quantum Landscape click the button below.

View the Quantum Landscape



Atos & STFC Hartree Centre Joseph Fourier Prize 2021

The Atos and Science and Technology Facilities Council (STFC) Hartree Centre Joseph Fourier Prize is a competition for scientists, applying individually or in teams, to their local competitions. The Joseph Fourier Prize aims at rewarding the work of researchers, academics and industrial scientists in Quantum Computing.

In order to stay at the forefront of innovation and remain competitive, public organisations and enterprises will have to understand how to effectively harness this emerging technology.

Through this competition, Atos is supporting innovation in Quantum applications including communications, computation, simulation, sensing and metrology that will lead to tangible industrial applications within our lifetime.

Scientists, academics and researchers can now, individually and in teams, register their projects in Quantum Computing.

Key dates:

26th April 2021 – Application Submission deadline

April 2021 – Eligibility Committee

May 2021 – Selection Committee, Final Jury, Award Ceremony

Find out more

Events

Quantum Tech

14-15 April 2021, online

This year's Quantum.Tech conference will be free and will take place online. The conference aims to drive forward the commercialisation of quantum applications across industry; to provide a global, annual meeting place for the quantum ecosystem; and to pull Quantum out of the research lab, and onto the shop floor. You can hear from industry experts, research institutions, government agencies and investors on the commercial applications of quantum computing, communications and sensing.

Find out more

BQIT:21

26-28 April 2021, online

The Virtual Bristol Quantum Information Technologies Workshop will return 26-28 April 2021 with a new programme of speakers presenting on various areas of Quantum Information Technologies.

BQIT is a three day annual workshop aimed at enabling leading UK and international academics and industrial partners to come together; to explore and discuss future ambitions and challenges in the field of Quantum Information Technologies.

Registration for the event is open and will close on 19 April 2021.

Find out more

BQIT:21

UK & France Quantum Innovation Exhibition

5-6 May 2020, online

This free two-day event is being organised by a number of the key organisation supporting quantum innovation in the UK and France and will showcase the national quantum programmes, funding landscapes, the future markets for quantum technologies and the leading quantum companies being developed in both countries. The organisational team is comprised of representatives from the UK National Quantum Technologies Programme, Innovate UK and Le Lab Quantique.

Find out more

QCrypt 2021

23 - 27 August 2021, online

QCrypt 2021 is the 11th edition of the yearly international scientific conference presenting last year's top results in quantum cryptography. The conference will take place online again this year. The agenda will be released in due course.

Find out more

SPIE Security + Defence 2021

13 - 16 September 2021, Madrid

SPIE's Security + Defence conference will take place on 13 - 16 September 2021, in Madrid. This event crosses the divide between fundamental optical science and the application of the underpinning technologies in advanced defence and security systems. The symposium will offer twelve conference topics including Emerging Technologies, Quantum Technologies and Quantum Information Science.

Find out more

SPIE Photonex + Vacuum Technologies

28 - 30 September 2021, Glasgow

Join academics, scientists and engineers sharing the latest research in photonics, biophotonics, quantum technologies, hyperspectral imaging, lasers, optical technologies, nanotechnology, vacuum equipment and in-vacuum technologies. The event will feature a 125-company exhibition with product demos, plenary presentations and technical workshops, and networking with exhibiting companies and colleagues.

Find out more

UK National Quantum Technologies Showcase 2021!

5 November 2021

Make sure to save the date for the UK National Quantum Technologies Showcase 2021. The Showcase will highlight the expertise, capabilities and advances of quantum technologies in the UK that take place during 2021. We look forward to seeing you there!

New Scientist Live North

28 - 30 January 2022 - Exchange Hall, Manchester

The Hub (as part of Quantum City) will be attending New Scientist Live North, in Manchester, from 28 - 30 January 2022, this is a new date as the 2021 event had to be postponed due to the Covid-19 pandemic. The Hub has previously attended the award-winning science festival 'New Scientist Live' in London, however, for the first time, the festival is being held in the north of England and we are delighted to be attending. It is expected that around 9000 people will attend the festival across the three days to view exhibits and listen to talks.

Work with us!

The Quantum Communications Hub welcomes enquiries about potential collaboration from those with interests closely aligned to our work. A number of options are available, including:

- Co-funded feasibility studies;
- Partnership in Industrial Strategy Challenge Fund proposals;
- Involvement in other externally funded schemes, both national and international in scope.

If you'd like to find out more about collaboration opportunities, visit our website or contact us via enquiries@quantumcommshub.net.

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