



Networks

Workshop 2022

Programme

Monday 11 April 2022

09:00 – 09:30: Registration and coffee

Session 1 – Quantum Networks: the perspective from industry – Chair: Martin Sadler, University of Bristol

Time	Speaker	Talk Title
09:30	Richard Penty, University of Cambridge & Quantum Communications Hub, UK	Welcome
09:35	Rachel Maze, BEIS	The UK's developing Quantum Strategy
09:50	Roger McKinlay, Innovate UK	Introduction to UK Quantum Landscape
10:05	Carmen Palacios-Berraquero, Nu Quantum	When Quantum Computing and Quantum Networks intersect
10:30	Mark Thompson, PsiQuantum	Path to large-scale quantum computing
10:55	Momtchil Peev, Huawei	Towards a universal design of Quantum Communication Networks
11:20	Helmut Griesser, ADVA	Quantum key distribution and fiber networks: a perfect match?
11:45	Discussion	

12:00 – 12:45: Lunch

Session 2 – Progress towards the Quantum Internet - Chair: Reza Nejabati, University of Bristol

Time	Speaker	Talk Title
12:45	Vicente Martin, Universidad Politécnica de Madrid, Spain	The SDN-QKD testbed in Madrid
13:10	Wolfgang Tittel, QuTech, TU Delft, Netherlands	Quantum network technology - the second life of rare-earth crystals
13:35	Adrian Wonfor, University of Cambridge & Quantum Communications Hub, UK	QKD secured networks in the UK
14:00	Liang Jiang, University of Chicago, USA	Quantum Data Centers
14:25	Discussion	

15:00 – 15:30: Coffee break



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Session 3 – Quantum entanglement networking - Chair: Siddarth Joshi, University of Bristol

Time	Speaker	Talk Title
15:30	Marco Lucamarini, University of York, UK	Coherence-enabled secure quantum communications
15:55	Reza Nejabati & University of Bristol & Quantum Communications Hub, UK	Dynamic and autonomous quantum entanglement network
16:20	Mohsen Razavi, University of Leeds, UK	Quantum Key Distribution over Encoded Quantum Repeaters
16:45	Daniel Higginbottom, Simon Fraser University, Canada	Optical observation of single spins in silicon
17:10	Maria Spiropulu, Caltech, USA	Quantum Teleportation Networks
17:35	Discussion	

18:00 – 19:00: Networking reception

Tuesday 12 April 2022

Session 1 – Devices for quantum networking - Chair: Richard Penty, University of Cambridge

09:00 – Registration and coffee

Time	Speaker	Talk Title
09:30	Qixiang Cheng, University of Cambridge, UK	Si-SiN integrated photonic switch fabrics – potential for use in quantum networks
09:55	Roger Colbeck, University of York & Quantum Communications Hub, UK	Assurance of quantum random number generators
10:20	Mete Atatüre, University of Cambridge, UK	Light-Matter Quantum Interfaces in Diamond
10:45	Hugues de Riedmatten, ICFO – The Institute of Photonic Sciences, Spain	Quantum Networking with solid-state rare-earth ion based quantum nodes
11:10	Gabriel Araneda Machuca, University of Oxford, UK	A two-node trapped ion quantum processor
11:35	Discussion	
11:50	Concluding remarks and thanks	

12:00 – 13:00 – Lunch and close