

Quantum technology challenges for the 21st Century

Wednesday 11 – Thursday 12 May 2016

Satellite meeting organised by Sir Peter Knight FRS, Professor Ian Walmsley FRS, Professor Gerard Milburn, Dr Stephen Till and Dr Jonathan Pritchard

DAY 1			
SESSION 1: Quantum photonics Chair: Miles Padgett FRS		SESSION 3: Timing and navigation Chair: Stephen Till	
09:00	Welcome by Peter Knight		
09:05	John Howell Compressive quantum sensing	13:30	Patrick Gill Optical and microwave clocks for navigation and timing
09:30	Tim Spiller Quantum secure communication technologies	14:00	Ed Hinds FRS Developing an atom accelerometer for navigation
10:00	John Rarity FRS Open challenges for optical quantum technologies	14:30	Erika Andersson Secure signatures - a practical quantum technology
10:30	Coffee	15:00	Tea
SESSION 2: Quantum computing and simulation Chair: Viv Kendon		SESSION 4: Real world engagement Chair: Jonathan Pritchard	
11:00	Andrew Daley Analogue quantum simulators: progress and applications	15:30	Konrad Banaszek Quantum metrology gets real
11:30	Simon Benjamin The power and practicality of network-paradigm quantum computing	16:00	Steve Beaumont Engaging with industry – experiences from the QUANTIC Hub
12:00	Janet Anders Thermodynamics at the nanoscale	16:30	Round table: where are the big challenges, road blocks and how to overcome them Chairs: Peter Knight and Kae Nemoto
12:30	LUNCH	17:00	CLOSE

DAY 2

SESSION 5: Enabling technologies Chair: Trevor Cross			
09:00	Douglas Paul Challenges in engineering platform technologies for quantum technology	13:30	Breakout groups report back Chair: Neil Stansfield
09:20	Graeme Malcolm Laser technology for emerging quantum technology application and instruments		
09:40	Matt Himsworth Enabling technologies for ultra-cold quantum technology		
10:00	Mark Thompson Integrated quantum photonics		
10:30	Coffee	15:00	Tea
11:00	Gerard Milburn Future landscape: what and when	15:30	Synthesis Chair: David Delpy FRS
11:30	Platform breakout groups Led by Kai Bongs, Miles Padgett FRS, Ian Walmsley FRS and Tim Spiller		
12:30	LUNCH	17:00	CLOSE

Draft programme – correct as of 5 May 2016 – subject to change