

Monday June 9	Tuesday June 10	Wednesday June 11	Thursday June 12	Friday June 13	Saturday June 14
<u>MORNING AND AFTERNOON</u> 9.00 – 17.30 Travel <i>(on your own)</i>	<u>MORNING</u> 9.00 – 12.30 Travel Ferry “Halunder Jet” <i>Hamburg – Helgoland</i>	<u>MORNING</u> 9.00 – 12.00 Information I chair: N. de Leon 1. I. Chuang 2. A. Clerk <i>coffee</i> 3. M. Lukin 4. W. Zurek	<u>MORNING</u> 9.00 – 12.00 Spacetime II chair: A. Bassi 1. M. Aspelmeyer 2. F. Giacomini <i>coffee</i> 3. M. Arndt 4. C. Rovelli	<u>MORNING</u> 9.00 – 12.00 Foundations/Sensing chair: A. Clerk 1. R. Spekkens 2. G. De les Coves <i>coffee</i> 3. D. Moore 4. C. Regal	<u>MORNING</u> 9.00 – 12.00 New platforms chair: C. Regal 1. R. Blatt 2. N. de Leon <i>coffee</i> 3. J. Pan 4. N. Mavalvala
	<u>AFTERNOON</u> 12.30 – 19.00 Free time <i>Lunch on your own</i>	<u>AFTERNOON</u> 12.00 – 15.00 Free time <i>Lunch on your own</i>	<u>AFTERNOON</u> 12.00 – 15.00 Free time <i>Lunch on your own</i>	<u>AFTERNOON</u> 12.00 – 15.00 Free time <i>Lunch on your own</i>	<u>AFTERNOON</u> 12.00 – 13.00 The Future Panel: G. Leuchs L. Maccone T. Northup* R. Schnabel P. Zoller <i>Lunch on your own</i>
	15.00 – 17.00 Posters I	15.00 – 17.00 Posters II	15.00 – 17.00 Posters III	15.00 – 17.00 Posters IV	
	17.00 – 19.00 <i>Dinner on your own</i>	17.00 – 19.00 <i>Dinner on your own</i>	17.00 – 19.00 <i>Dinner on your own</i>	17.00 – 19.00 <i>Dinner on your own</i>	
<u>EVENING</u> Banquet 17.30 - Start of registration 18. - Opening of reception 18.30 - Start of dinner 20.00 – 22.00 History+Context chair: J. Ye 1. A. D. Stone 2. E. Crull 3. P. Ball	<u>EVENING</u> 19.00 – 22.00 Foundations I chair: M. Aspelmeyer 1. C. Fuchs 2. N. Gisin 3. R. Renner <i>break</i> Panel: A. Aspect G. Brassard A. Cabello C. Caves* A. Zeilinger	<u>EVENING</u> 19.00 – 22.00 Spacetime I chair: M. Arndt 1. J. Maldacena 2. M. Zych 3. J. Ye <i>break</i> Panel: M. Christodoulou L. Hardy I. Pikovski J. Preskill* W. Unruh	<u>EVENING</u> 19.00 – 22.00 Information II chair: A. M. Rey 1. V. Khemani 2. A. Harrow 3. I. Cirac <i>break</i> Panel: C. Bennett L. Jiang* B. Whalley R. Schoelkopf M. Simmons	<u>EVENING</u> 19.00 – 22.00 Macroscales chair: M. Zych 1. M. Devoret 2. Y. Chu 3. A. Bassi <i>break</i> Panel: S. Haroche G. Milburn* A. M. Rey C. Silberhorn D. Wineland	<u>Evening</u> 16.00 – 20.15 Travel Ferry “Halunder Jet” <i>Helgoland – Hamburg</i> <i>Dinner on your own</i>
All talks: 30 minutes + 5 minutes for questions Morning coffee breaks: 40 minutes All panels: 60 minutes Evening breaks: 15 minutes * Panel discussion leader					

Monday June 9

EVENING 20.00 – 22.00

History+Context chair: J. Ye

1. A. D. Stone

Stages in the Conceptual Development of Quantum Science

2. E. Crull

It takes two to entangle: Early debates on quantum nonlocality

3. P. Ball

The way to Helgoland: Quantum theory in 1924-5

Tuesday June 10

EVENING 19.00 – 22.00

Foundations I chair: Aspelmeyer

1. C. Fuchs

The fascinating history of X and Z

2. N. Gisin

From Bell inequalities to Quantum Measurements

3. R. Renner

Quantum foundations and gravity as oracles for each other

Wednesday June 11

MORNING 9.00 – 12.00

Information I chair: N. de Leon

1. I. Chuang

From It to Qubit: A Journey of Quantum Information

2. A. Clerk

Quantum versus classical dephasing dynamics: surprises in the many-body limit

3. M. Lukin

Exploring the quantum computing frontier using neutral atoms

4. W. Zurek

Decoherence and quantum darwinism

EVENING 19.00 – 22.00

Spacetime I chair: M. Zych

1. J. Maldacena

A quantum spacetime

2. M. Zych

Uncertainty principle for spacetime trajectories

3. Jun Ye

Scaling clock performance for fundamental physics

Thursday June 12

MORNING 9.00 – 12.00

Spacetime II chair: A. Bassi

1. M. Aspelmeyer

Quantum sources of gravity in the lab: status & challenges

2. F. Giacomini

What can we learn from testing the gravitational field of a quantum source?

3. M. Arndt

Raising Schrödinger's cat: from carbon kittens to metal cats

4. C. Rovelli

From quanta of light to quanta of space: theory and observations in loop quantum gravity.

EVENING 19.00 – 22.00

Information II chair: A. M. Rey

1. V. Khemani

Topological Quantum Spin Glass Order: A new route to quantum memory

2. A. Harrow

Quantum information and many-body entanglement

3. I. Cirac

Quantum Computing and Simulation in the presence of errors

Friday June 13

MORNING 9.00 – 12.00

Foundations/Sensing chair: A. Clerk

1. R. Spekkens

On achieving realism in quantum theory

2. G. De les Coves

Interfaces of quantum theory with other disciplines

3. D. Moore

Mechanical quantum sensors for the invisible universe

4. C. Regal

Quantum mechanical motion at the mesoscale

EVENING 19.00 – 22.00

Macroscales chair: M. Arndt

1. M. Devoret

Synthetic atoms versus natural atoms: Emergence of coherent quantum degrees of freedom in superconducting circuits

2. Y. Chu

Massive mechanical objects in the quantum regime

3. A. Bassi

Are there quantum jumps?

Saturday June 14

MORNING 9.00 – 12.00

New platforms chair: C. Regal

1. R. Blatt

Quantum computation and quantum simulation with strings of trapped Ca⁺ ions

2. N. de Leon

Low-loss materials for 2D transmons with lifetimes and coherence times exceeding 1 millisecond

3. J. Pan

Dream or Reality Quantum Information Processing the Past, Present and Beyond

4. N. Mavalvala

Quantum opportunities in gravitational wave detection and beyond

All talks: 30 minutes + 5 minutes for questions

Morning coffee breaks: 40 minutes

All panels: 60 minutes

Evening breaks: 15 minutes

* Panel discussion leader