

|       | Tuesday 15 <sup>th</sup> September                                                                        | Wednesday 16 <sup>th</sup> September                                                                      | Thursday 17 <sup>th</sup> September                                                                                       |
|-------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 09:00 | Arrival                                                                                                   | F. Schreck: Realization of continuous superradiant lasing on a narrow optical transition                  |                                                                                                                           |
| 09:30 |                                                                                                           | J. Dunningham: Extending quantum sensors into new regimes                                                 | M. Parniak: Upconversion radiometry in the mm-wave domain                                                                 |
|       |                                                                                                           | L. Conlon: Fault-tolerant Heisenberg-limited quantum sensing                                              | A. Sierant: Quantum enhancement in a multi-parameter quantum sensor.                                                      |
| 10:30 |                                                                                                           | Break (10:30 — 11:00)                                                                                     | C. Ortiz Marrero: Quantum error detection for Heisenberg-limited sensing                                                  |
| 10:50 |                                                                                                           |                                                                                                           | Break (10:50 — 11:20)                                                                                                     |
| 11:00 |                                                                                                           | K. Weatherill: Terahertz sensing and imaging using Rydberg atoms.                                         |                                                                                                                           |
| 11:20 |                                                                                                           | R. Hanley: Paving the path for a quantum inflection                                                       | A. Marchant: Quantum sensors for monitoring of the upper atmosphere                                                       |
| 12:00 | Registration and lunch (12:00 — 13:20)                                                                    | S. Schwartz: New approaches in microwave measurements with cold Rydberg atoms                             | J. Zipfel: From laboratory quantum sensors to deployable atomic spin gyroscopes: Engineering challenges and opportunities |
| 12:30 |                                                                                                           | Lunch (12:30 — 13:30)                                                                                     | A. Jamison: Toward quantum enhanced sensing in fundamental physics                                                        |
| 13:00 | Welcome                                                                                                   |                                                                                                           | Close                                                                                                                     |
| 13:30 | G. Morley: Diamonds are for everything: quantum gravity, finding cancer, navigation and space exploration | G. Birkel: Multi-dimensional arrays of individual atoms for quantum sensing                               | Lab Tours (14:00)                                                                                                         |
| 14:00 | H. Knowles: Quantum sensing in the life sciences using spins in diamond                                   | C. Rich: Towards quantum-enhanced sensing with arrays of entangled atoms and molecules                    |                                                                                                                           |
|       | I. Deutsch: Vector magnetometry with continuous measurement and nonlinear dynamics                        | S. Gardiner: Generating Entangled States in a Hybrid System of Polar Molecules and Rydberg atoms          |                                                                                                                           |
| 14:50 |                                                                                                           | Workshop Photo (14:50)                                                                                    |                                                                                                                           |
| 15:00 | Break (15:00 — 15:40)                                                                                     | Break (15:00 — 15:30)                                                                                     |                                                                                                                           |
| 15:30 |                                                                                                           | M. Mather: From cells to powertrains: What makes a quantum sensor the practical choice?                   | Departure                                                                                                                 |
| 15:40 | M. Mitchell: Energy resolution limits in the quantum sensing of magnetic fields                           | A. Cooper-Roy: Phase-shear correlation spectroscopy for single-shot gradiometry beyond ensemble coherence |                                                                                                                           |
|       | D. Barberena: Squeezed light for spin squeezing preparation                                               | Panel Discussion (16.25—17.30)                                                                            |                                                                                                                           |
|       | P. Poggi: Universally robust quantum control                                                              |                                                                                                           |                                                                                                                           |
| 17:00 | Poster Flash Talks                                                                                        | Free Time                                                                                                 | <div>Invited (30 + 5 mins)</div> <div>Contributed (15 + 5 mins)</div>                                                     |
| 18:30 | Poster Session                                                                                            |                                                                                                           |                                                                                                                           |
|       | Drinks and Snacks (17:30 – late)                                                                          | Conference Dinner (18:30 – late)                                                                          |                                                                                                                           |



Invited (30 + 5 mins)



Contributed (15 + 5 mins)