

MONDAY 10TH JUNE

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11:45 – 12:30     **Arrival coffee and sandwiches**  
Percy building, ground floor foyer

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Session chair: Nick Proukakis

12:30 – 13:00     **Nick Parker, Newcastle**  
DIPOLAR CONDENSATES: TURBULENCE AND ROTATIONAL TUNING

13:00 – 13:30     **Hannah Price, Birmingham**  
TOPOLOGICAL PUMPING WITH PHOTONS AND ATOMS

13:30 – 13:50     **Himadri Dhar, Imperial**  
DYNAMICS AND CORRELATIONS IN THE FORMATION OF A PHOTONIC  
BOSE-EINSTEIN CONDENSATE

13:50 – 14:10     **Helgi Sigurdsson, Southampton**  
TIME DELAY POLARITONICS

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14:10 – 14:50     **Break**

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Session chair: Veronica Ahufinger

14:50 – 15:20     **Simon Gardiner, Durham**  
ROTATIONAL SENSING WITH SPIN-ORBIT COUPLED BOSE EIN-  
STEIN CONDENSATES

15:20 – 15:50     **Juan Garrahan, Nottingham**  
SLOW QUANTUM DYNAMICS DUE TO CONSTRAINTS

15:50 – 16:20     **Benjamin Doyon, Kings**  
THE HYDRODYNAMICS OF INTEGRABLE SYSTEMS, AND AN EXPERI-  
MENTAL CONFIRMATION

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16:20 – 17:00     **Break**

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Session chair: Simon Cornish

17:00 – 17:30

**Kali Wilson, Durham**

MEAN-FIELD INSTABILITIES IN DUAL-DEGENERATE MIXTURES OF Cs AND Yb

17:30 – 18:00

**Ulrich Schneider, Cambridge**

NON-EQUILIBRIUM DYNAMICS IN QUASIPERIODIC OPTICAL LATTICES

18:00 – 18:20

**Callum Duncan, Heriot-Watt**

MEAN-FIELD PHASE TRANSITIONS IN A QUASICRYSTALLINE OPTICAL LATTICE

18:20 – 18:40

**Francois Damanet, Strathclyde**

ATOM-ONLY DESCRIPTIONS OF THE DRIVEN-DISSIPATIVE DICKE MODEL

18:40 – 19:00

**Calum Maitland, Heriot-Watt**

QUANTUM OPTICS OF RELATIVISTICALLY ROTATING TWO-LEVEL ATOMS

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19:30 – Late

**Evening Meal**

Alsham (Lebanese), 15 Gallowgate, NE1 4SG

TUESDAY 11TH JUNE

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Session chair: Tom Billam

09:00 – 09:30

**Leticia Cugliandolo, Paris**

GEOMETRIC ASPECTS OF ORDERING PHENOMENA

09:30 – 10:00

**Nick Proukakis, Newcastle**

DYNAMICAL PHASE TRANSITIONS IN QUANTUM GASES

10:00 – 10:30

**Fabian Essler, Oxford**

QUANTUM QUENCHES IN SPLIT 1D BOSE GASES

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10:30 – 11:10

**Break**

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Session chair: Leticia Cugliandolo

11:10 – 11:40

**Janne Ruostekoski, Lancaster**

BALINESE CUP TRICK AND OTHER FUN WITH SUPERFLUIDS

11:40 – 12:10

**Carlo Barenghi, Newcastle**

INHOMOGENEOUS QUANTUM TURBULENCE

12:10 – 12:40

**Hayder Salman, East Anglia**

ORDERING OF VORTEX EXCITATIONS IN A 2D BOSE GAS FAR FROM EQUILIBRIUM

12:40 – 13:00

**Julian Schmitt, Cambridge**

A TWO-DIMENSIONAL BOX TRAP FOR ULTRACOLD BOSONS WITH TUNABLE INTERACTIONS

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13:00 – 14:30

**Lunch**

Armstrong building, reception rooms G69 & 70, ground floor

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Atomtronics session chair: Thomas Bland

14:30 – 15:00

**Donatella Cassettari, St Andrews**

HOLOGRAPHICALLY-GENERATED OPTICAL TRAPS FOR ULTRACOLD ATOMS

15:00 – 15:30

**Veronica Ahufinger, Barcelona**

ULTRACOLD ATOMS CARRYING ORBITAL ANGULAR MOMENTUM IN RING POTENTIALS

15:30 – 16:00

**Hélène Perrin, Paris**

DYNAMICAL RING FORMED BY A SUPERFLUID ROTATING AT A SUPERSONIC SPEED

16:00 – 16:30

**Anna Minguzzi, Grenoble**

OUT-OF-EQUILIBRIUM STRONGLY INTERACTING BOSONS

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16:30 – 17:10

**Break**

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Session chair: Marzena Szymanska

17:10 – 17:40

**Robert Smith, Oxford**

DYNAMICS OF THE UNITARY BOSE GAS

17:40 – 18:10

**Carlos Lobo, Southampton**

SPIN POLARISED FERMIONS IN QUADRUPOLE TRAPS: SOME PUZZLING EXPERIMENTAL RESULTS

18:10 – 18:40

**Klejdja Xhani, Newcastle**

CRITICAL TRANSPORT AND VORTEX DYNAMICS IN A THIN ATOMIC JOSEPHSON JUNCTION

18:40 – 19:00

**Viktor Tsepelin, Lancaster**

PAIR-BREAKING AND QUANTUM TURBULENCE IN SUPERFLUID  $^3\text{He-B}$

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19:30 – Late

**Evening Meal**

Zizzis (Italian), 42-50 Grey St, NE1 6AE

WEDNESDAY 12TH JUNE

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Session chair: Hannah Price

09:00 – 09:30

**Hamid Ohadi, St Andrews**

WEAKLY INTERACTING POLARITON LATTICES AND A WAY TO MAKE THEM STRONGER

09:30 – 10:00

**Barbara Pietka, Warsaw**

SPIN POLARIZED EXCITON-POLARITON CONDENSATES IN SEMIMAGNETIC STRUCTURES

10:00 – 10:30

**Marzena Szymanska, UCL**

DRIVEN-DISSIPATIVE QUANTUM FLUIDS OF LIGHT

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10:30 – 11:10

**Break**

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Session chair: Hayder Salman

11:10 – 11:40

**Simon Jäger, Saarland**

DYNAMICAL PHASE TRANSITIONS TO OPTOMECHANICAL SUPERRADIANCE

11:40 – 12:10

**Beatriz Olmos, Nottingham**

SUBRADIANCE-PROTECTED EXCITATION TRANSPORT

12:10 – 12:30

**German Sinuco-Leon, Sussex**

COHERENT CONTROL OF QUANTUM SYSTEMS WITH POLYCHROMATIC DRIVING

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12:30 – 13:45

**Lunch**

Armstrong building, reception rooms G69 & 70, ground floor

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JQC showcase chair: Charles Adams

13:45 – 14:00

**Kev Weatherill, Durham**

ULTRA-HIGH-SPEED TERAHERTZ IMAGING USING RYDBERG ATOMS

14:00 – 14:15

**Thomas Bland, Newcastle**

QUENCH DYNAMICS IN COUPLED RING TRAPS

14:15 – 14:30

**Simon Cornish, Durham**

BUILDING A QUANTUM SIMULATOR USING ULTRACOLD RBCS MOLECULES

14:30 – 14:45

**Tom Billam, Newcastle**

SIMULATING VACUUM DECAY IN COLD ATOM SYSTEMS

14:45 – 15:00

**Matt Jones, Durham**

PRECISION MEASUREMENT WITH INDIVIDUALLY TRAPPED STRONTIUM ATOMS

15:00 – 15:15

**Andrew Baggaley, Newcastle**

KNOT SPECTRUM OF TURBULENCE

15:15 – 15:30

**Matthew Frye, Durham**

CALCULATIONS OF ULTRACOLD ATOMIC COLLISIONS: SCATTERING LENGTHS AND FESHBACH RESONANCES

15:30 – 15:45

**Lewis Clark, Newcastle**

DEPHASING IN HOT-ELECTRON QUANTUM OPTICS

15:45 – 16:00

**Viv Kendon, Durham**

QUANTUM COMPUTING FOR SCIENTIFIC APPLICATIONS

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**Departure**

## Organisers

Nick Proukakis, Hayder Salman, Marzena Szymanska, and Thomas Bland

## With thanks to



**EPSRC**

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