

# JQC Symposium 2015

**Date:** 6th July 2015 (Monday)

**Time:** 10:30am to 6pm

**Venue:** PH8, Rochester Building, Durham University

## *Programme*

10:00 — 10:30    Setting up of posters

### **10:30 Session 1    Chair: Robert Potvliege**

10:30 — 10:35    Introduction by Charles Adams, Director of the Joint Quantum Centre

10:35 — 11:00    Paul Griffin (Strathclyde)

*Single-shot, phase-insensitive readout of an atom interferometer*

11:00 — 11:20    Nick Parker (Newcastle)

*Dipolar vortices and dark solitons in the quantum ferrofluid*

11:20 — 11:40    Peter Molony (Durham)

*Creation of  $87\text{RbCs}$  molecules in the rovibrational ground state*

11:40 — 12:10    Tea / Coffee break

### **12:10 Session 2    Chair: Nick Proukakis**

12:10 — 12:35    Jiannis Pachos (Leeds)

*Knots, computation and materials*

12:35 — 12:55    Viv Kendon (Durham)

*Quantum walks and their uses*

12:55 — 13:15    Chris Wade (Durham)

*Optical bistability and terahertz sensing with a Rydberg vapour*

13:15 — 13:25    Daniel Benedicto Orenes (Birmingham)

*Pursuing quantum magnetism with cold atoms*

13:25 — 14:30    Lunch break + Poster session

### **14:30 Session 3    Chair: Nick Parker**

14:30 — 14:55    Manuel Valiente (Heriot-Watt)

*Interacting gauge theory with ultracold Bose gases*

14:55 — 15:15    James Keaveney (Durham)

*Faraday filtering in atomic vapours: from Hamiltonian to application*

15:15 — 15:25    Neal Radwell (Glasgow)

*Spatially dependent electromagnetically induced transparency*

15:30 — 16:00    Tea / Coffee Break

**16:00 Session 4 Chair: Eckart Wrede**

16:00 — 16:20 Arin Mizouri (Durham)  
*A moving trap Zeeman decelerator*

16:20 — 16:30 Graham Bruce (St-Andrews)  
*High density sub-Doppler laser cooling of  $^{40}\text{K}$  using grey molasses on the  $D_2$ -Line*

**17:00 Colloquium**

17:00 — 18:00 Colloquium by Jabez McClelland (NIST, USA)  
*Ultrabright ions from ultracold atoms*