Postdoc Positions in cold atoms

Wed, 2017-01-25 06:08 - YESHPAL SINGH [1] **At:** University of Birmingham, UK
Deadline: 20 February, 2017

Location

University of Birmingham Edgbaston Road
Birmingham United Kingdom
52° 29' 10.4748" N, 1° 53' 25.4436" W
See map: Google Maps [2]

The unprecedented control over cold atoms has resulted in extremely precise sensors such as atomic clocks and atom interferometers. Our lab has two main goals, one fundamental science and another technological development. From the scientific point of view, it aims to work on enabling concepts to asking very fundamental questions at the cutting edge of science. Technologically it utilises state-of-the-art methods with the potential to reduce the form factor of atom-based quantum sensors by at least an order of magnitude which would enable a step change towards commercial applications. These sensors will also be a tool for space missions, where compact, low power, ultra-high precision investigation of the local space-time manifold is required, or indeed where a distributed network of such sensors would be appropriate. In brief, applications include fundamental physics tests, quantum ICT devices, satellite/ground geodesy, oil or mineral prospecting and communication network timing.

We are leading the UK National Quantum Technology Hub in Sensors and Metrology – a ground breaking £80m collaborative project in partnership with the Universities of Glasgow, Nottingham, Southampton, Strathclyde and Sussex and in collaboration with over 70 industry partners and NPL. We are changing the way you see the brain, medical imaging, underground hazards, communicate, and even outer space beyond the capabilities of current sensor technology, boosting demand for this world-leading technology.

To create and contribute to the creation of knowledge by undertaking a specified range of activities in various projects based on ultracold Sr atoms. Some of the projects include realization of long range dipolar interactions between Sr atoms trapped in a lattice, a portable optical lattice clock and a Space Optical Clock (SOC). We are looking for suitable candidates for various phd and postdoc positions.

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- Postdoc [3]

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