

Fellowship/Lectureship (high energy particle physics phenomenology)

Salary £24,161–£38,772

School of Physics & Astronomy

This is an exciting new position initially jointly funded by the **University of Southampton** (UoS) and the **Council for the Central Laboratory of the Research Councils** (CCLRC).

Applications are invited for a five-year NExT Fellowship in Particle Physics Phenomenology, to be held jointly with the High Energy Physics (SHEP) group in the School of Physics and Astronomy at the UoS and the Particle Physics Division (PPD) of the Rutherford Appleton Laboratory (RAL) part of CCLRC. During this time, it is expected that the successful candidate will divide his/her time approximately equally between SHEP and RAL-PPD and the post will mainly be dedicated to research. At the end of the Fellowship, the successful candidate will join the faculty of the School of Physics and Astronomy in Southampton as a University Lecturer.

The main purpose of this position is to further the collaborative alliance, established since 2001 and including direct scientific collaboration and joint seminars, between the theorists in the SHEP group at Southampton and the experimentalists in the PPD group at RAL. The two groups are now launching the New Experiment-Theory (NExT) institute, see <http://www.hep.phys.soton.ac.uk/next>. NExT will promote novel one-to-one interactions between each participating SHEP theorist and an individual experiment in RAL-PPD, which will involve theorists in the actual process of real data analysis and experimental discovery. In addition to his/her scientific research, the NExT Fellow will be expected to play a leading role in spearheading all NExT activities.

Candidates must hold a PhD in High Energy Particle Physics and could be theorists with a proven record in phenomenological research of direct relevance to experiment or experimentalists with a strong interest in theory and a background in Monte Carlo (MC) data generation and/or real data analysis. Preference will be given to applicants wishing to work with an LHC experiment on which members of the RAL-PPD group are active. The selected candidate will be required to capitalise upon the existing vast computational facilities available and to relate to the many PDRAs and students working at both institutions. Finally, a travel grant for regular visits to CERN will be made available to the successful applicant.

The SHEP theory group is generally acknowledged to be a centre of excellence across a wide spectrum of particle physics activities, including Collider Phenomenology, Standard Model (QCD and EW) Physics, Beyond the Standard Model Physics, Cosmology, Neutrinos, B-Physics, Lattice QCD, Field Theory and AdS/CFT. Besides, the UoS School of Physics and Astronomy achieved the highest possible 5* rating in the last national Research Assessment Exercise, making it one of the top five Physics departments in the UK for research.

RAL-PPD plays a leading role in the UK experimental programme in particle physics and hosts the largest experimental group in the country, comprising collaborations based at CERN (ATLAS, CMS, LHCb), DESY (ZEUS, H1), SLAC (BaBar), FNAL (MINOS) as well as non-accelerator experiments (at ILL, Soudan2 and UKDMC) and R&D for future accelerators and detectors (the ILC and muon/neutrino experiments).

Further information about SHEP and RAL-PPD can be found at the following webpages:

The post is available from February 2007. Appointment will be at Lecturer level 4 salary £24,161–£29,716 dependent on qualifications and experience and at Level 5 £30,606–£38,772 for candidates with a record of internationally recognised research and of relevant publications.

In addition to the standard UoS forms, a CV, list of publications, teaching philosophy statement and a research programme should be sent to Dr Stefano Moretti, e-mail: stefano@hep.phys.soton.ac.uk, to whom informal enquiries may also be made. Informal contact in RAL can be made with Dr Claire Shepherd-Themistocleous, e-mail: C.H.Shepherd-Themistocleous@rl.ac.uk. The documentation should encompass the areas of research in which the candidate is active or interested in becoming active, explain why the applicant is suitable for the role described within the NExT institute and how he/she envisages practically driving the NExT initiative forward.

To find out more about us and the roles we have on offer visit www.jobs.soton.ac.uk and apply on-line. Alternatively email: recruit@soton.ac.uk or tel: 023 8059 2750. The closing date for this position is 16th November 2006. Please quote reference number 0389-06-E on all correspondence. Interviews will tentatively be held on 27th & 28th November 2006.

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