

From: Patrick Regan <p.regan@SURREY.AC.UK <mailto:p.regan@surrey.ac.uk> >

Subject: Funded PhD position at the University of Surrey in Experimental Nuclear Physics: Nuclear Data Measurement and Evaluation.

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A fully funded, PhD studentship in

EXPERIMENTAL NUCLEAR PHYSICS: Nuclear Data Measurement and Evaluation.

is now available for applications at the University of Surrey, Guildford UK.

Potential students who have or are expected to obtain at least an upper second class honours BSc (Hons) or MPhys in Physics or a related subject with an interest in nuclear physics research are encouraged to apply.

The studentship (up to 48 months duration) is part of the recently funded STFC Global Challenge Network on Nuclear Data.

Areas of focussed research for this project are likely to include:

(a) Nuclear spectroscopy of fission fragments based on the construction and utilisation a highly-selective gamma-ray spectrometer combining up to 36 LaBr₃ scintillation detectors with up to 24 Hyper-Pure Germanium detectors in an array to be based at the Institute of Nuclear Physics (IPN) Orsay, France. This array will enable prompt and delayed spectroscopic studies of neutron-rich fission-fragments using gamma-ray emission following fast neutron-induced fission using the LICORNE directional neutron source.

This will provide information on the nuclear structure of the fission fragments produced and also additional information on the angular momentum and excitation energy distribution of the prompt fission fragments in fast-neutron induced

fission. The data will provide useful inputs on prompt gamma heat in potential Gen IV / fast-neutron nuclear reactors.

(b) Additional projects may include characterisation of beta-decay and measurements of beta-delayed neutron emission of very neutron-rich exotic nuclei using high-resolution gamma-ray spectroscopy at international laboratories including the TRIUMF laboratory in Vancouver, Canada , IFIN-HH Laboratory Romania, and CERN-ISOLDE, Switzerland.

The successful applicant will be part-based within the Radioactivity Group at the UK's National Physical Laboratory and within the Physics Department at the University of Surrey, Guildford. There may also be a possibility of extended placements during the course of the studentship at either a major overseas Laboratory and/or a UK industrial research centre.

The position is available to start from 1st October 2016 is funded for up to 4 years.

Interested parties should contact Prof. Paddy Regan (<mailto:p.regan@surrey.ac.uk> p.regan@surrey.ac.uk) for more information and are encouraged to apply online via the University of Surrey:

<<http://www.surrey.ac.uk/postgraduate/physics-phd>> <http://www.surrey.ac.uk/postgraduate/physics-phd>

to create an account, see

<https://sits.surrey.ac.uk/live/sits.urd/run/siw_ipp_lgn.login?process=siw_ipp_app&code1=RXA80Q0001D&code2=0008>https://sits.surrey.ac.uk/live/sits.urd/run/siw_ipp_lgn.login?process=siw_ipp_app&code1=RXA80Q0001D&code2=0008

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