MARIE CURIE EXPERIENCED RESEARCHER FELLOWSHIP
FP7-ITN-2012, 317446, INFIERI: INtelligent Fast Interconnected and Efficient Devices for Frontier Exploitation in Research and Industry.

Development and Demonstration of Advanced Pattern Recognition for HEP triggering

Rutherford Appleton Laboratory, Didcot, Oxfordshire, UK

Duration: 2 years
Application Deadline: 12th January 2015
Salary: Approximate average salary £41,000, plus living allowance

Applications are invited for an Experienced Researcher (ER) position in Experimental Particle Physics with the CMS group within the Particle Physics Department (PPD) at the STFC Rutherford Appleton Laboratory. The position is supported by the European Union Marie Curie Initial Training Network (ITN) scheme on the INFIERI project (infieri-network.eu). ER fellowship positions are equivalent to Research Associate positions.

The first-level of triggering within HEP experiments requires very fast processing of data. Increasing rates of data production at the LHC necessitate an increase in the sophistication of use of information in this initial triggering stage. This project will define and test the use of tracking information at this level using the most advanced programmable logic devices (such as FPGAs). The system design will require both a knowledge of the physics objectives and requirements as well as cutting edge technical knowledge to enable its realization.

PPD is one of the largest Particle Physics groups in the UK. The design and construction of the CMS electromagnetic calorimeter endcaps was led by the PPD CMS group, which also played a major role in the tracker readout. The group is currently leading various aspects of the upgrade of the CMS Level 1 Calorimeter trigger and plays leading roles in data analysis across a broad spectrum of BSM physics topics.

The Science and Technology Facilities Council is a world-leading multi-disciplinary science organisation, and our goal is to deliver economic, societal, scientific and international benefits to the UK and its people – and more broadly to the world. http://www.stfc.ac.uk

The applicant must have a Ph.D., or equivalent, in Particle Physics or Electronic Engineering or have at least four years of full-time equivalent research experience, and no more than five years experience from the start of their career in research (including the time spent working towards a Ph.D.). The applicant should have a strong interest in Experimental Particle
Physics. Candidates who can demonstrate an interest in detector instrumentation, particularly those with some experience of using FPGAs, will be at an advantage.

In order to fulfill the eligibility criteria of the Marie Curie ITN at the date of recruitment, applicants must not have resided or carried out their main activity in UK for more than 12 months in the 3 years immediately prior to their recruitment. UK candidates can apply if they have resided in another country for more than 3 of the last 4 years. Gender balance and equal opportunity policy are part of the INFIERI hiring strategy. Fluency in English, the ability to work in teams, and the ability and willingness to travel are essential.

Online applications only, please submit a covering letter explaining why the candidate is suited to this position, a CV, a list of publications and the names and contact details of three referees plus transcripts of B.Sc./M.Sc. degrees. No Agencies.

Applications are handled by UK Shared Business Services; for further information and to apply please visit our website: [www.topcareer.jobs](http://www.topcareer.jobs). Reference number IRC130593.

Closing date: 12th January 2015.

For an informal discussion about this role please contact: Dr. Claire Shepherd-Themistocleous (claire.shepherd@stfc.ac.uk)

Please also inform Mrs. G. Birch ppddivisionb@stfc.ac.uk that you have submitted an application.