

## **Research Associate on the CMS experiment.**

Salary: Band D £31,931-£34,709 or Band E £39,748-£44,166 Gross per Annum (Dependent on Experience)

2-year fixed term contract, with expectations of an extension.

Closing date for applications is Thursday 23rd December 2021

Applications are invited for a Research Associate position in Experimental Particle Physics to work on the CMS experiment within the Particle Physics Department (PPD) at the STFC Rutherford Appleton Laboratory. The post will initially be for two years with the possibility of renewal.

PPD is one of the largest Particle Physics groups in the UK and the CMS group has been prominent on the CMS experiment since the start of the collaboration. The initial design and construction of the CMS electromagnetic calorimeter endcaps was led by PPD and the group also played a major role in the tracker readout. RAL hosts the UK Tier 1 and PPD runs a Tier 2 centre for the LHC experiments. For phase I upgrades the group had significant activity on the level 1 calorimeter trigger upgrade. The group now has major involvement in the upgrade of the CMS detector for HL-LHC running and is working on the level 1 trigger upgrade, the track finder for the replacement silicon tracker and the readout of the barrel electromagnetic calorimeter. All of these activities involve fast electronics and the use of cutting edge FPGAs. The group has a strong interest in physics beyond the standard model including a long history of work on searching for  $Z'$  bosons, various BSM Higgs bosons and numerous analyses that exploit the groups expertise on lepton reconstruction. A particular feature is the long-standing close collaboration with phenomenologists as part of the NExT Institute.

The post will encompass analysis work on BSM physics and a new initiative on HEP software and computing. The latter is funded by the Swift-HEP project and is a major new UK initiative to tackle the challenges of software and computing for the HL-LHC era. The focus of this post will be on the use of accelerated computing technologies. The applicant must have or be about to receive a Ph.D. in Particle Physics or a similar field.

Applications should consist of a CV and a covering letter explaining why the candidate is suited to this position and the names and address of three referees. Applications may be made online at <https://careersportal.co.uk/UKRI-careers/jobs/research-associate-on-the-cms-experiment-1414>

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