UNIVERSITY OF BIRMINGHAM

Postdoctoral researcher in silicon detectors R&D

University of Birmingham - Physics and Astronomy

Location: Birmingham

Salary: Grade 7, Full time starting salary is normally in the range £31,406 to £40,927, with potential progression once in post to £43,434 a year.

Hours: Full time

Contract type: Fixed-Term/Contract

Placed on: 19 January 2022

Closes: 16 February 2022

Job Ref: 98929

The post is available with immediate effect until 31 March 2024.

This post will be based in the School of Physics and Astronomy of the University of Birmingham. The successful candidate will create and contribute to the creation of knowledge by developing novel silicon sensors to support the particle and nuclear physics groups' commitments to the R&D for a vertex and tracking detector for the Electron-Ion Collider and future experiments.

The postholder will specifically develop novel Monolithic Active Pixel Sensor (MAPS) prototypes in 65 nm CMOS technology. Main duties include the experimental characterisation of 65 nm MAPS prototypes in the Birmingham Instrumentation Laboratory for Particle physics and Applications (BILPA) and at test beam facilities, including the planning of the device characterisation programme in coordination with colleagues in the group and (inter)nationally.

Work will be carried out in the BILPA laboratory, in collaboration with scientific partners at UK Universities and research labs, and within the EIC collaboration, ALICE ITS3 project, and CERN Experimental Physics department R&D programme.

The University of Birmingham is an equal opportunity employer. The School of Physics and Astronomy is an Athena SWAN Silver Award holder and JUNO Champion, welcomes people from all backgrounds and is committed to fostering an inclusive environment where diversity is at the heart of who we are. We encourage applications from all qualified applicants; those from minority groups who are under-represented in this discipline are particularly welcome.

Informal enquiries to Dr Laura Gonella, l.gonella@bham.ac.uk, Professor Peter Jones, p.g.jones@bham.ac.uk, Professor Paul Newman, p.r.newman@bham.ac.uk.

Skills and Experience Required:

- A higher degree (PhD) in High Energy Physics or related discipline equivalent qualifications

- Extensive experience with testing techniques for the characterisation of silicon detectors in laboratory and test beam experiments
- Proven ability to develop software for the analysis of experimental data
- Ability to evolve project specifications based on collected experimental evidence
- Experience working in a team with students, engineering, and technical staff
- Willingness to travel within the UK and oversea to conduct experiments and work with collaborators
- Ability to write software/firmware and/or develop hardware for DAQ systems is a bonus
- High level analytical capability
- Ability to communicate complex information clearly via oral presentations/posters, scientific publications, seminars
- Fluency in relevant models, techniques or methods and ability to contribute to developing new ones
- Ability to assess resource requirements and use resources effectively
- Understanding of and ability to contribute to broader management/administration processes
- Contribute to the planning and organising of the research programme and/or specific research project
- Co-ordinate own work with others to avoid conflict or duplication of effort
- Knowledge of the protected characteristics of the Equality Act 2010, and how to actively ensure in day to day activity in own area that those with protected characteristics are treated equally and fairly

To download the full job description and details of this position and submit an electronic application online please click on the Apply Online button above or visit our careers website

https://bham.taleo.net/careersection/external/jobdetail.ftl?job=210002K4&tz=GMT%2B00%3A00&tzname=Europe%2FLondon

Please quote Job Ref **98929** in all enquiries.