

UNIVERSITY COLLEGE LONDON

Job Title	Electronics Engineer (High Energy Physics)
Department	Physics and Astronomy
Reports to	Mark Lancaster
Grade	7
Salary	£32,375 - £39,132 per annum (inclusive of London Allowance)
How to apply	Please apply online for this position The application should be accompanied with a CV, details of three referees and a detailed summary of research history and experience.

Informal enquiries can be made to Prof. Mark Lancaster (m.lancaster@ucl.ac.uk, +44 (0)7855 472095).

The Project

We have an immediate opening for an electronics engineer who will have responsibility for developing, commissioning and maintaining readout/trigger and data acquisitions systems for the HEP group. In the first instance this is an 18-month appointment, but it is anticipated to be a longer-term appointment subject to future grant funding.

The successful candidate will have in-depth knowledge in readout and trigger electronics and data acquisition systems for high energy physics detectors and hands-on experience in developing, building and commissioning such systems. Apart from his/her own research work the appointee will liaise closely with other members of the HEP electronics group.

The UCL high energy physics (HEP) is one of the larger experimental groups in the country and consists of 19 academics and long-term fellows, with 19 research staff, 6 technical/computing staff and approximately 30 PhD students. The group is presently involved in a variety of projects representing our interests in electroweak symmetry breaking (ATLAS), the nature of the neutrino (MINOS+, SuperNEMO, LBNE), QCD (ATLAS), dark matter (LUX, DARKSIDE), physics beyond the present collider energy frontier (ANITA/AURA, COMET, FNAL g-2) and next generation colliders (PLASMA-WAKEFIELD).

We are presently playing a leading role in the construction of the SuperNEMO neutrinoless double beta decay experiment, upgrades of the ATLAS detector at the LHC, DAQ for XFEL, COMET and FNAL g-2, detectors for a muon-tomography project (CREAM-TEA) as well as the development of new detectors for future experiments, particularly in the area of dark matter, low background physics and long baseline neutrino experiments.

The successful candidate will be an innovator and problem solver, capable of delivering existing projects within budget and on time, while also leading scientific

research into novel readout and trigger systems.

In addition to four laboratories/workshops on the Gower Street campus, the group has a significant amount of lab-space (including a clean-room) and access to specialised engineering expertise at MSSL, where large-scale detector construction can be accommodated.

Duties and Responsibilities

To develop, construct and commission readout/trigger electronics and data acquisition systems for the HEP group

To liaise closely with the team of engineers and technicians involved in readout/trigger and data acquisition projects

To contribute to progress reports on research for funding bodies as required

To contribute to the preparation and drafting of research bids and proposals

To contribute to the overall activities of the research team and department as required

To contribute to the induction and direction of other research staff and students as requested

To ensure that equipment is safe and maintained in working order

As duties and responsibilities change, the job description will be reviewed and amended in consultation with the postholder

The postholder will carry out any other duties as are within the scope, spirit and purpose of the job as requested by their supervisor or the Head of Department

The postholder will actively follow UCL policies including Equal Opportunities and Race Equality policies

The postholder will maintain an awareness and observation of Fire and Health & Safety Regulations

Person Specification

Essential

In-depth knowledge in readout/trigger electronics and data acquisition systems for high energy physics experiments and hands-on experience with such systems

An undergraduate qualification in electronics engineering

Experience with VHDL, Verilog and Xilinx ISE

Ability to liaise closely with and work within a team of academics, RAs, PhD students, engineers and technicians involved in readout/trigger and data acquisition projects

Effective written and verbal communication skills

Experience of working collaboratively in a research environment

Commitment to high quality research

Commitment to UCL's policy of equal opportunity and the ability to work harmoniously with colleagues and students of all cultures and backgrounds

Desirable

A postgraduate qualification in high energy physics or electronics engineering

Software experience of languages commonly used in HEP data acquisition systems:
C/C++, PYTHON, Java

Experience with the following packages: TCAD, Ansoft HFSS, Altera Quartus

UCL TERMS AND CONDITIONS

Please view the full terms and conditions at:

http://www.ucl.ac.uk/hr/salary_scales/Support_Research_tcs.php.