 Further Information

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| Job title | **Research Assistant / Research Associate** |
| Grade | Grade 5 / Grade 7 |
| Salary range | £26,243 to £30,395 (Grade 5)£32,236 to £39,609 (Grade 7) |
| Staff Group | Research |
| Department / Institution | Department of Physics |

This role is funded by a Science Technology and Facilities Council (STFC) Consolidated Grant. The funding for this post is available for up to 3 years.

The High Energy Physics Research Group of the Department of Physics, University of Cambridge, invites applications for a Research Associate/Assistant to work on the LHCb experiment at the CERN Large Hadron Collider.

The Cambridge group is very active in the analysis of LHCb data; the maintenance, operation and software for the LHCb Ring-Imaging Cherenkov (RICH) detectors; and preparations for the upgrade(s) of the LHCb RICH system.

The role holder will have a PhD in experimental particle physics or will be submitting a PhD thesis. The post-holder will be expected to make leading contributions to LHCb physics analyses and to take on responsibilities for the Cambridge contributions to the LHCb RICH system.

Appointment at Research Associate is dependent on having a PhD (or equivalent experience), including those who have submitted but not yet received their PhD (in which case appointment will initially be made at Research Assistant and amended to Research Associate when the PhD is awarded). The Research Assistant salary (grade 5) falls within the range £26,243 to £30,395. The Research Associate (grade 7) salary falls within the range £32,236 to £39,609.

The starting date is 1 October 2019, or as soon as possible thereafter.

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|  | Key duties and responsibilities | % time spent/ frequency |
| 1 | **LHCb Experiment at the Large Hadron Collider** | 70% |
|  | * Physics analysis in the area of Standard Model or beyond the Standard Model.
* Regular presentation of physics analysis research to the Cambridge LHCb group and appropriate LHCb physics working group.
* Writing up results in physics papers and leading them through the LHCb internal review process.
* Assisting with training, mentoring and development of research students.
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| 2 | **LHCb RICH System and Upgrades** | 20% |
|  | * Lead contributions to the maintenance, operation and software of the LHCb RICH system.
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| 3 | **General Contributions to the High Energy Physics Group** | 5% |
|  | * Organization of HEP group seminars
* HEP public engagement, including annual HEP Masterclass
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| 4 | **Other duties** | 5% |
|  | * Represent HEP Group on Cavendish Research Staff Committee
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**Person Profile**

This section details the knowledge, skills and experience we require for the role.

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| Education & qualifications | * A good first degree (2.1 or equivalent)
* PhD in experimental particle physics or a closely related discipline
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| Specialist knowledge & skills | * Ability to pursue scientific investigation from the conception stage through to publication
* Strong background in physics analysis
* Excellent knowledge of HEP programming languages.
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| Interpersonal & communication skills | * Organisational skills
* Communication skills
* Team-working skills
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| Relevant experience | * Experience of managing own workload
* Experience of analysing and interpreting data
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| Additional requirements | * To demonstrate ability to write reports, present results and contribute to academic papers.
* A high level of accuracy and attention to detail.
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**Terms and Conditions**

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| **Location** | The Cavendish Laboratory, Department of Physics, JJ Thomson Avenue, Cambridge CB3 0HE |
| **Working pattern** | Monday - Friday |
| **Hours of work** | Your employment is full-time.There are no formal conditions relating to hours and times of work but you are expected to work such hours and days as are reasonably necessary for the proper performance of your duties. Your times of work should be agreed between you and your head of institution.  |
| **Length of appointment** | Limit of Tenure: 30 September 2022. |
| **Probation period** | 6 months  |
| **Annual leave** | Full time employees are entitled to annual paid leave of 6.6 weeks (or 33 days), plus public holidays. The leave year runs from 1 October to 30 September |
| **Pension eligibility** | Universities Superannuation Scheme (USS) Pension scheme details, including information about the legal requirement for the University to automatically enrol its eligible jobholders into a qualifying workplace pension scheme from 1 March 2013, is available at: <http://www.pensions.admin.cam.ac.uk/>. |
| **Retirement age** | The University does not operate a retirement age research staff. |

**Screening Check Requirements**

We have a legal responsibility to ensure that you have the right to work in the UK before you can start working for us. If you do not have the right to work in the UK already, any offer of employment we make to you will be conditional upon you gaining it. If you need further information, you may find the Right to Work page within the ‘Applying for a job’ section of the University’s Job Opportunities pages helpful (please see <http://www.jobs.cam.ac.uk/right/have/>).

**Application Process**

To submit an application for this vacancy, please click on the link in the ‘Apply online’ section of the advert published on the University’s Job Opportunities pages. This will route you to the University’s Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

Please ensure that you upload your Curriculum Vitae (CV) and a covering letter in the Upload section of the online application. If you upload any additional documents which have not been requested, we will not be able to consider these as part of your application.

The closing date for applications is 1 September 2019. Informal enquiries can be addressed via email to the Head of High Energy Physics, Professor Valerie Gibson (email gibson@hep.phy.cam.ac.uk). Please quote reference KA19879 on your application and in any correspondence about this vacancy.

General Information

**The University of Cambridge**

The University of Cambridge is one of the world’s oldest and most successful Universities, with an outstanding reputation for academic achievement and research. It was ranked first in the 2011 QS World University Rankings and its graduates have won more Nobel Prizes than any other university in the world. The University comprises more than 150 departments, faculties, schools and other institutions, plus a central administration and 31 independent and autonomous colleges.

The University and the Colleges are linked in a complex historical relationship. The Colleges are self-governing, separate legal entities which appoint their own staff. They admit students, provide student accommodation and deliver small group teaching (supervisions). The University awards degrees and its faculties and departments provide lectures and seminars for students, determine the syllabi for teaching and conduct research.

There is much more information about the University at <http://www.cam.ac.uk/univ/works/index.html> which we hope you will find helpful.

**Department of Physics**

The Cavendish Laboratory was founded in 1871, with the simultaneous appointment of James Clerk Maxwell as the first Cavendish Professor. It has a distinguished history of contribution to science. Twenty-nine Nobel prizewinners have worked for considerable periods within the laboratory, and the Cavendish is associated with many notable discoveries, including the identification of the electron and neutron, the structure of DNA, and the discovery of pulsars. In 1973, the Laboratory moved from the centre of Cambridge to new buildings on a greenfield site, two kilometres west of the city centre. This formed the nucleus for the University’s development of a new physical science campus in West Cambridge. This currently hosts the Departments of Materials Science and Metallurgy, Computer Science, parts of Engineering, the Institute of Astronomy, Veterinary Science, the University’s Information Services, the headquarters of the British Antarctic Survey, Schlumberger Research and a variety of small technology companies. The Department of Physics is also currently engaged in the construction and development of a set of new buildings on the site associated with its emerging research activities.

The Department (together with the Institute of Astronomy) submitted the research of 161 members for the 2014 National Research Excellence Framework performed by the Higher Education Funding Council for England (HEFCE) and 91% of submissions were rated as internationally excellent or world-leading.

Technical support for research includes mechanical workshop facilities equipped with a wide range of CNC machines for the production of novel apparatus, staffed with technicians accustomed to working in a research environment. There is also an electronics workshop with a wide range of capabilities in analogue and digital design and production. The department also runs its own helium liquefier.

Research activities span a wide range of physics, and are currently loosely organised under the following research themes: Astrophysics, High Energy Physics, Biological and Biomedical Physics, Energy Materials, Emergent Quantum Phenomena, Assembly and Function of Complex Systems and Quantum Devices and Measurements, underpinned by Theoretical and Computational Physics. Information about the current research activities in these areas is available at: [www.phy.cam.ac.uk/research/](http://www.phy.cam.ac.uk/research/) .

**In 2017 the Department launched its Values**

**Consideration**

treating others as we would like others to treat us

**Respect for all**

showing respect for each other

**Helping others to excel**

actively seeking ways to enable everyone to give of their best, regardless of their personal circumstances

**Supporting career aspirations**

encouraging and supporting everyone in pursuing their career aspirations

**Recognising contribution**

recognising everyone’s contribution to the Department’s success

We would like all our staff to sign up to our values and make them part of their working life in the Cavendish.

**Recent developments**

The Department is engaged in a number of new inter- and cross-disciplinary research programmes. In 2008 it established a new **Physics of Medicine** programme focusing on biological and biomedical applications of physics which is based in a new purpose-built interdisciplinary centre on the Laboratory site. A new building opened in October 2013 hosting the **Battcock Centre for Experimental Astrophysics**. This is adjacent to the Kavli Institute for Cosmology in Cambridge and to the main buildings of the Institute of Astronomy. This has enabled all Cambridge astronomers to be brought together in a single complex of buildings for the first time. In 2018, construction started on a new state-of-the-art building, **Cavendish III**, into which the majority of the Department’s research and teaching facilities will move within the next five years, replacing the existing laboratory buildings which date from the 1970s.

**Maxwell Centre**

A brand-new £26M state-of the-art building in the heart of the West Cambridge campus, the Maxwell Centre acts as a hub for collaboration between academia and industry. It operates from within the Physics department but is serving as a gateway to Cambridge Physical Sciences and Technology overall, linking through to several departments as well as outwards to external partners. Website: [www.maxwell.cam.ac.uk](http://www.maxwell.cam.ac.uk)

The centre currently hosts academic researchers from several disciplines and departments, two EPSRC Centres for Doctoral Training (in Nanoscience and in Computational Methods for Materials Science), the Winton Programme for the Physics of Sustainability, hot-desking as well as resident industrial collaborators, and the SKF University Technology Centre. Furthermore, it links across the University through Strategic Research Networks and Initiatives, research coordinators, knowledge transfer facilitators, Research Office and Cambridge Enterprise either based in the Maxwell Centre or regularly visiting.

**What the University can offer you**

One of our core values at the University of Cambridge is to recognise and reward our staff as our greatest asset. We realise that it's our people who have built our outstanding reputation and that we will only maintain our leading position in the academic world by continuing to attract and retain talented and motivated people. If you choose to come and work with us, you will find that we offer:

* **Excellent benefits –** You will be eligible for a wide range of competitive benefits and services, including numerous discounts on shopping, health care, financial services and public transport. We also offer defined benefits pension schemes and tax-efficient bicycle, car lease and charity-giving schemes.

We will help you balance your home and work life by providing you with generous annual leave entitlement and procedures for requesting a career break or flexible working arrangements if you need them. You will also have access to a range of well-being support services, including in-house Occupational Health and Counselling services. If you have childcare responsibilities, you may also benefit from the enhanced maternity/adoption pay, two nurseries and a holiday play scheme that we provide.

We are keen to welcome new employees from other parts of the UK and other countries to Cambridge. If you will be relocating to Cambridge on a centrally funded appointment of two years or more, you may be eligible for our relocation expenses scheme. The University [Accommodation Service](http://www.admin.cam.ac.uk/offices/accommodation/) (<http://www.accommodation.cam.ac.uk/>) will also be available to help you find suitable rented accommodation and to provide advice on renting arrangements and local facilities, if required. In addition, certain academic and academic-related appointments are eligible for the Shared Equity Scheme which offers financial assistance with the purchase of living accommodation.

* **A welcoming and inclusive environment -** We will help you settle into your new role and working environment through a central [University induction event](http://www.admin.cam.ac.uk/offices/hr/staff/new/probation.html), local induction activities and our online induction package. Where appropriate to your role, you will have a probation period to provide a supportive framework for reviewing your progress and discussing your training and development needs.

If you are relocating to Cambridge, you and your family will be welcome to attend the Newcomers and Visiting Scholars Group, which provides an opportunity to find out more about Cambridge and meet other people new to the area.

* **Extensive development opportunities -** The encouragement of career development for staff is one of the University's core values. We put this into practice through various services and initiatives, including:
* A [wide-range of training courses](http://www.training.cam.ac.uk/) and online learning packages.
* The [Staff Review and Development (SRD) Scheme](http://www.admin.cam.ac.uk/offices/hr/policy/appraisal/), which is designed to enhance work effectiveness and facilitate career development post-probation.
* [Leave for career and personal development](http://www.admin.cam.ac.uk/offices/hr/staff/benefits/careers.html), including long-term study leave for assistant staff and sabbatical leave for academic staff.
* The [CareerStart@Cam programme](http://www.admin.cam.ac.uk/offices/hr/jobs/careerstart/), which supports assistant staff roles without higher education qualifications to develop their skills, experience and qualifications. Assistant staff may also apply for financial assistance for study which results in a qualification.
* [Reduced staff fees](http://www.admin.cam.ac.uk/offices/gradstud/fees/costs/stafffee.html) for University of Cambridge graduate courses.
* The opportunity to attend [lectures and seminars](http://www.cam.ac.uk/staffstudents/seminars.html) held by University departments and institutions.
* Policies and processes dedicated to the career development of researchers and the implementation of the principles of the Concordat, which have led to the University being recognised with an HR Excellence in Research Award by the European Commission.

You can find further details of the benefits, services and opportunities we offer can be found in our CAMBens Employee Benefits web pages at <http://www.hr.admin.cam.ac.uk/pay-benefits/cambens-employee-benefits>. A range of information about living and working in Cambridge is also available to you within the University’s web pages at <http://www.jobs.cam.ac.uk/> and <http://www.hr.admin.cam.ac.uk/hr-staff/information-staff>.

**Equality of Opportunity at the University**

We are committed to a proactive approach to equality, which includes supporting and encouraging all under-represented groups, promoting an inclusive culture and valuing diversity. We make selection decisions based on personal merit and an objective assessment against the criteria required for the post. We do not treat job applicants or members of staff less favourably than one another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

We have various diversity networks to help us progress equality; these include the Women’s Staff Network, the Disabled Staff Network, the Black and Minority Ethnic Staff Network and the Lesbian, Gay, Bisexual and Transgender Staff Network. In addition, we were ranked in the top 100 employers for lesbian, gay and bisexual (LGB) staff in Stonewall’s Workplace Equality Index 2013 and we hold an Athena SWAN silver award at organisation level for promoting women in Science, Technology, Engineering and Medicine. The Department of Physics is proud to hold an Athena SWAN Gold award.

We are supportive of staff with caring responsibilities, such as through our flexible working, career break and returning carers schemes. We encourage individuals to include details of any breaks in employment due to caring responsibilities in applications for employment so that these can be taken into consideration in assessments made, where appropriate.

**Information if you have a Disability**

The University welcomes applications from individuals with disabilities and we are committed to ensuring fair treatment throughout the recruitment process. We will make adjustments to enable applicants to compete to the best of their ability wherever it is reasonable to do so, and, if successful, to assist them during their employment. Information for disabled applicants is available at: <http://www.admin.cam.ac.uk/offices/hr/staff/disabled/>.

We encourage you to declare any disability that you may have, and any reasonable adjustments that you may require, in the section provided for this purpose in the application form. This will enable us to accommodate your needs throughout the process as required. However, applicants and employees may declare a disability at any time.

If you prefer to discuss any special arrangements connected with a disability, please contact hr@phy.cam.ac.uk or telephone 01223 764816.