

**Postdoctoral Research Assistant in Microseismic Monitoring
(Ref no: 16619)**

FURTHER PARTICULARS

JOB DESCRIPTION

School/ Address:	Earth Sciences, Wills Memorial Building, Queens Road, Bristol, BS8 1RJ
Academic Faculty:	Faculty of Science
Grade:	I
Academic Career Pathway:	Two
Profile Level:	a
Salary:	£29,972 - £ 33,734

*Progressable role:	No
Contract Type:	<i>Fixed term</i>
Work pattern:	Full-time <i>*Applies to Profile Levels b & c only</i>

Main Job Purpose:

The postdoctoral researcher will conduct research on microseismic monitoring techniques in hydrocarbon reservoirs. Our focus is on extracting more information from microseismic data than is currently practised within industry – to go ‘beyond the dots in the box’ to understand what microseismicity can tell us about the mechanical processes occurring in oil and gas reservoirs. A particular area of interest is in analysing microearthquake focal mechanisms/moment tensors to improve our understanding of the geomechanical processes that generate microseismicity in oil and gas reservoirs. Novel methods that are developed will be applied to oilfield microseismic data provided by industrial sponsors of the Bristol University Microseismicity Projects (BUMPs). The PDRA will be expected to assist in administering the BUMPs project, coordinating regular communication and meeting with industrial sponsors. The applicant should have a background in geophysics, and should preferably have experience in hydrocarbon reservoir monitoring. The PDRA will present research at international conferences and contribute to manuscripts for publication in international journals.

Statements of Responsibilities:

Research

Microseismic data analysis. Development of methods to image focal mechanisms and moment tensors of microseismic events, and to relate these observations to geomechanics/fracture mechanics processes in rocks.

Administration

Help with coordination of BUMPS communications, sponsors meetings and website.

BACKGROUND INFORMATION

The University and the City of Bristol

The University of Bristol (www.bristol.ac.uk) is an international powerhouse of learning, discovery and enterprise. Its vision is of a university whose excellence is acknowledged locally, nationally and globally. The Sunday Times (September 2008) described the University of Bristol as ‘one of the jewels of British higher education’ and ‘at the cutting edge academically’.

The University is a member of the Worldwide Universities Network, a grouping of 18 research-led institutions of international standing, and of the Russell Group of universities, an association of 20 major research-intensive universities of the UK.

The University of Bristol is dedicated to academic achievement across a broad range of disciplines. It is made up of 24 schools, organised in six faculties: Arts; Engineering; Medical and Veterinary Sciences; Medicine and Dentistry; Science; and Social Sciences and Law. It has approximately 12,000 undergraduate and 5,000 postgraduate students from around 100 countries. The Quality Assurance Agency for Higher Education, which carried out an institutional audit of the University in 2008, awarded Bristol the highest rating available for its management of education and the academic standards of its awards. It has 31 Fellows of the Royal Society and nine of the British Academy – a remarkable achievement for a relatively compact university.

Bristol supports both individual scholarship and interdisciplinary or thematic research of the highest quality. In the 2008 Research Assessment Exercise, 93% of research at Bristol was deemed to be of international standard. Over 61% of the research work assessed in 48 research fields was awarded either the top 4* rating, defined as 'world leading', or the 3* rating, classified as 'internationally excellent'.

A key element of the University's vision is to ensure that its research and education contribute to regional and national society and the economy. The University works hard to build effective links with the community and its industries, through high-quality research collaboration and productive knowledge exchange, the creation and support of new companies and enterprises, and the licensing of intellectual property.

Engaging the public is a vital part of university life and an area in which staff and students are actively involved. It is part of the University's core business and is integral to research and teaching that is grounded in societal need and that promotes lifelong learning. It is also vital to widening participation and fair access; and for students involved in volunteering, engagement is an aspect of the distinctive 'Bristol experience'.

The University is committed to operating in a sustainable manner, working constantly to reduce carbon emissions and improve the sustainability of the physical estate. Its ambitious capital programme plans to invest in the most cost-effective way in new buildings and facilities over the next few years to support research, teaching and learning.

The University of Bristol is a stimulating and supportive environment for all students and staff, distinguished by a commitment to high standards, respect for the individual and a strong sense of collegiality. It is also an integral part of a beautiful, historic city that has been selected as European City of the Year 2008, Provincial City of the Year 2008 and Britain's most sustainable city 2008. It has been officially designated a 'Centre of Culture' and a 'Science City' by the Government. It is also the only UK city to be shortlisted for the European Green Capital Award 2010, and is England's first 'Cycling City'.

With a population of over 400,000, Bristol is the largest city in the South West and the region's leading centre for business, culture and education. It has a long tradition of trade and engineering, and is also home to many of the newer financial services and creative and media industries. The historic docks in the city centre, now a thriving focus for leisure and the arts, retain many echoes of Bristol's maritime history. Theatre, music, the fine arts and cinema are all well represented, and the neighbouring city of Bath also offers a wide range of cultural activities. Bristol is well provided with open space and parkland and is within easy reach of attractive coast and countryside, including the Cotswolds and several National Parks. The city has an international airport and offers easy rail and motorway links.

More information about the city of Bristol is available at <http://visitbristol.co.uk/> and www.bristol.gov.uk/.

The Faculty of Science

The Faculty of Science is the largest Faculty within the University, with around 2,900 undergraduates, 850 postgraduates, 248 permanent academic staff, 350 research staff and over 200 support staff. It consists of the Schools of Biological Sciences, Chemistry, Earth Sciences, Geographical Sciences, Mathematics,

Physics and Experimental Psychology. The individual successes of these schools have played a major part in the University of Bristol's excellent reputation.

The Faculty has established good cross-school and cross-faculty links in teaching and research, and offers an outstanding intellectual environment for both its staff and its undergraduate and postgraduate students. [Research Centres](#) within the Faculty include Biogeochemistry, Bristol ChemLabs (one of HEFCE's Centres of Excellence in Learning and Teaching), Glaciology, Behavioural Biology, Organic Geochemistry, Environmental & Geophysical Flows, Interface Analysis, the Laboratory for Advanced Computation, and Quantum Computation and Information. There is also BRIDGE (Bristol Initiative for the Dynamic Global Environment) in Geographical Sciences, and COGNIT (Cognition and Information Technology Research Centre) in Experimental Psychology. The very successful Molecular Recognition Centre links Science with the Faculty of Medical and Veterinary Sciences particularly well; the Quantum Information Group links Science with the Faculty of Engineering; and the School of Geographical Sciences provides an important interaction with the Faculty of Social Sciences and Law. There are strong and successful cross-faculty interactions in Climate Change, Cognition and Vision, Interface Analysis, Nanotechnology and Neuroscience.

Schools in the Faculty have also been successful in external links and awards. The School of Mathematics is working in partnership with GCHQ on the Heilbronn Institute for Mathematical Research, and the Faculty is also involved in the Academic Innovation Centre (AIC) at Emerson's Green, a joint venture company set up by Bristol and Bath Universities, which will provide accommodation and business support for high-tech companies spun out from the Universities' research.

Research Assessment

In the [RAE2008](#), the UK Government's audit of research quality confirmed that the University of Bristol's Faculty of Science is one of the UK's leading centres of research excellence. The Faculty was ranked 3rd among its peers in the UK, after Oxford and Cambridge, as judged by the volume weighted "grade point average" of its units of assessment. Two thirds of the Faculty's research activity was rated at the highest 4* or 3* levels ("world leading" or "internationally excellent") and 95% at least internationally recognised (2* or better).

The Faculty made returns in 9 Units of Assessment, with the following results:

UoA	Activity profile (%)					GPA
	4*	3*	2*	1*	0*	
Biological Sciences	10	40	45	5	0	2.55
Earth Sciences	25	50	20	5	0	2.95
Chemistry	25	50	25	0	0	3.00
Physics	20	35	35	10	0	2.65
Pure Mathematics	30	40	25	5	0	2.95
Applied Mathematics	25	45	30	0	0	2.95
Statistics	25	45	30	0	0	2.95
Geographical Sciences	30	40	25	5	0	2.95
Psychology	10	50	30	10	0	2.60

Doctoral Training Centres

Bristol University, and the Science Faculty especially, has proved highly successful in winning competitive funding from EPSRC and other agencies to develop Doctoral Training Centres, focussed on areas of national need and emerging and interdisciplinary research themes. These include the Bristol Centre for Complexity Sciences, Functional Nanomaterials, and Chemical Synthesis. There are also several similar new doctoral training programmes funded by MRC, including the Bristol Centre for Systems Biomedicine which involves collaborations within the Science Faculty.

The School of Earth Sciences

The School of Earth Sciences (<http://www.gly.bris.ac.uk>) is situated at the historic heart of the campus, in the neo-Gothic Wills Memorial Building. Geology has been taught at Bristol since 1876 but the name of the department was recently changed to the School of Earth Sciences. The School currently has 24 academic teaching staff (including 10 professors), 18 support staff, 45 Postdoctoral Research Fellows, 48 PhD students and 46 Masters students. There are 3 year and 4 year, undergraduate courses offered in Geology and Environmental Geosciences. In the last UK Research Assessment Exercise (RAE2008) the School was identified as one of the leading UK earth science schools, with its research recognized as world leading and of international excellence.

The School of Earth Sciences thrives on a research-intensive environment, characterised by individuals and groups of international standing; working collectively or individually on earth science problems of global concern. The School is loosely divided into six research groups, united by a common research goal or common equipment, but with an emphasis on interdisciplinary collaboration. A brief summary of these groups and their research goals and membership is given below.

The Bristol Experimental Earth Studies (BEEST) research group utilizes a wide range of state-of-the-art experimental and analytical techniques to investigate a diverse set of topics ranging from degassing in volcanic systems to crystallization of the Earth's core. Profs: Blundy FRS, Walter. Drs: Kohn, Schumacher (+10 Post Docs, 9 PG).

The Bristol Geophysics research group uses physical properties of the solid Earth to measure structure and processes on scales from the single crystal to the entire planet. Prof: Kendall, Helffrich. Drs: Biggs, Gottsmann, Mader, Rust, Teanby, Whitaker, Wookey, Bastow (+7 Post Docs, 7 PG).

The Geochemistry research group uses isotopic and elemental abundances to quantify processes from planetary evolution, through melt generation and differentiation, to climate change and surface chemical cycles. Profs: Sherman, Elliott, Vance. Drs: Coath, Robinson, Chung (+10 Post Docs, 14 PG).

The Palaeobiology and Biodiversity research group covers a breadth of time scales and organismal groups to understand biological evolution on Earth. Research methodology combines traditional observational studies of fossils with pioneering developments in numerical and phylogenetic analysis, biomechanical modelling, X-ray tomography and molecular biological techniques. Therefore, placing the group at the forefront of paleobiological investigations. Profs: Benton, Donoghue. Drs: Rayfield, Ruta, Rücklin, Schmidt, Hendy (+11 Post Docs, 20 PG).

The Climate and Environmental Change research group includes experts in Earth system science, biogeochemistry, biosphere-atmosphere interactions, the carbon cycle, climate change and studies large-scale Earth system processes and interactions, and the linkages among environmental change, human activities and policy. Prof: Vance. Drs: Robinson, P. Foster, Hendy, Hornibrook, Siddall, Whitaker (+6 Post Docs, 4 PG).

The Volcanology research group combines experimental studies on small-scale analogue systems and theoretical modelling, together with field data and petrology, to investigate volcano dynamics and geophysical flows in volcanic and sedimentary systems. The research is applied to hazard and risk assessment in volcanic emergencies and for mitigation. Profs: Sparks FRS, Blundy FRS, Kendall, Aspinall. Drs: Biggs, Mader, Whitaker, Rust, Phillips, Watson, Gottsmann (+9 Post Docs, 12 PG).

The School hosts excellent and diverse laboratory facilities in keeping with the increasingly technological approach to earth science problems. Facilities are the predominant, but not the exclusive domain of research groups and it is instructive to describe them in terms of what they do, rather than who they "belong" to.

The *Experimental Petrology* laboratories contain 4 piston-cylinders apparatus, 2 newly installed multi-anvil presses, 7 internal heating diamond-anvil cells, 2 external heating diamond-anvil cells, 2100 watt fibre lasers, 1100 watt diode laser, 9 hydrothermal vessels, 3 one-atmosphere furnaces (with gas-mixing

capability) and a sample-polishing apparatus.

The *Microbeam Analysis* laboratories consist of two electron microprobes (JEOL JXA8600 and Cameca SX100), analytical SEM (Hitachi 3500N with EDAX) and FTIR spectroscopy.

In the *Analytical Geochemistry* laboratories there are 2 Finnigan Neptune high-resolution multi-collector ICP-MS, a Finnigan Triton multi-collector TIMS, a Finnigan Element 2 high-resolution magnetic sector ICP-MS, NewWave 193 nm excimer laser ablation system, ICP-AES and Bruker NMR (joint funded with Chemistry) in addition to extensive controlled-environment clean laboratory space.

In the *Geological Fluid Dynamics* laboratory there are high-speed videography and digital image processing facilities, rotational and oscillatory rheometry, custom-designed tanks and flumes, and a cold room laboratory.

The *Biogeochemistry* laboratories in the school are part of the Bristol Biogeochemistry Research Centre, which also has member laboratories in Chemistry (the Organic Geochemistry Unit and Atmospheric Chemistry Group) and Geography (Bristol Glaciology Centre and the Low Temperature Experimental Facility (LOWTEX)). The Biogeochemistry laboratories are equipped with a stable isotope ratio mass spectrometry, cavity ring down spectrometer for concentration and isotope analysis of methane, gas and ion chromatographs, a reduction gas analyzer, UV-vis spectrometer, microbiology facilities, constant temperature rooms, and a range of field equipment for sampling soil, sediment, water and gases.

The *Aqueous Geochemistry* laboratories have equipment for experiments to be done under controlled conditions of temperature and atmospheric composition, in addition to analytical capabilities including ICP-AES, UV-Vis spectroscopy (colorimetry), potentiometry and voltammetry.

The *Palaeontology* laboratory is used to prepare, image and reconstruct fossil materials. It hosts fossil preparation equipment and rock digestion, digital imaging microscopes, workstations for computed tomography, finite elements analysis and morphometry, an histology facility, a marine culture facility, and a molecular palaeobiology laboratory equipped for amplifying, cloning and for molecular phylogenetics, molecular clock studies and the analysis of gene expression in animal development through in situ hybridization.

The *Geophysics* group owns and maintains a range of field-based equipment: a 24-channel in-field seismograph, 6 broadband seismometers and data loggers, Lacoste-Romberg and Burris gravity meters, Scintrex micro-gravity meter, Gravity-Consult Earth Tide recording station, Geometrics proton-precession magnetometer, and Topcon and Leica GPS receivers (Base and Rover). Computing facilities include two computing clusters (112 processors and a 36 processors), and two 10TB Raid arrays.

The *rock crushing facilities* installed at the school allow for the preparation of whole-rock powders for geochemical analyses as well as heavy or accessory mineral separation from sediments, soft and hard rocks. The crushing room hosts a hydraulic rock splitter and a Retsch BB200 jaw crusher equipped with manganese steel jaws for the fragmentation of almost any natural rock. A Retsch PM100 ball mill equipped with agate jar and agate milling balls is being employed for the preparation of very-low contamination powders used for XRF or solution ICP-MS/AES analyses. The mineral separation facilities host a Wilfley heavy mineral separation table, a Frantz magnetic separator, LST heavy liquid separation and hand-picking facilities, which are used for instance for the preparation of high-quality zircon grain mounts for in-situ analyses by Laser-ablation and ionprobe.

Laboratories are supported by a dedicated School Workshop staffed by skilled machinists. More details on the School's laboratories can be found on our website at:

<http://www2.gly.bris.ac.uk/www/admin/info/contacts.html>

The Earth Sciences library is housed in the Wills Memorial Building, offering excellent provision, with over 22,000 books and journals, many on-line. Further details of research facilities, activities and output can be found under the relevant research groups on the School website.

The University's Positive Working Environment

The University's Positive Working Environment (PWE) agenda is an ongoing process with the aim of making working life at the University of Bristol productive, rewarding, enjoyable and healthy for all colleagues. PWE describes the things we believe are important as an employer, and a series of actions to help us deliver them. As an employee of the University, you will have access to a range of benefits which includes, amongst others:

- **For staff with families, those planning to have families, and those with other caring responsibilities**, the Work and Family Steering group, providing a combination of information, training and support; maternity/paternity coaching service, The University's Early Years Nursery and a childcare voucher scheme;
- **Professional training and support** including an extensive programme of training & development courses, focus on work-life balance, tailored leadership and management workshops, flexible working policies, support groups such as the Women's Research Group, careers guidance and a team of International Staff Advisers;
- **For health, fitness and wellbeing**, our Staff Wellness Programme, Staff Counselling Service, Staff Club, and staff member rates for the Sports Centres and the Swimming Pool;
- **Travel to work benefits** including interest-free bicycle loans, free cycle training and priority car parking spaces for car sharers, parents and carers, and a University bus shuttle.

To find out more about PWE please visit <http://www.bristol.ac.uk/pwe/>

PERSON SPECIFICATION

The qualifications, skills, knowledge and experience outlined below provide a summary of what is required to carry out this job effectively. They also form the selection criteria on which the decision on who to appoint will be made. Please ensure that you show how you meet the criteria outlined below in your application.

Relevant Experience, Skills and Knowledge

Essential	Desirable
Research experience in Geophysics or Engineering Seismology.	Research experience in focal mechanism detection. Research experience in microseismic monitoring of reservoirs.

Relevant Qualifications

Essential	Desirable
Ph.D (or equivalent) in geophysics, engineering geology, civil engineering or a related field. Experience of publishing scientific research.	(Co-)author of multiple research articles in international journals. Experience of presenting research at international conferences.

Communication and Interpersonal Skills

Essential	Desirable
Able to work effectively in a multidisciplinary team. Albe to communicate effectively with both industry and academic communities.	

Additional Criteria

Essential	Desirable

CAREER PATHWAY INFORMATION

As part of the process of modernising its pay and grading systems, the University has introduced career pathways for academic staff. What this means is that all members of academic staff have a clear career pathway involving a series of levels with distinct role profiles, each with its unique requirements. Each profile sets out what is expected of an academic at the particular level. The role profiles also set out a collection of competencies expected for each level. Progression or promotion to the next level will occur after these competencies have been attained and where a role at the higher level is available.

The four academic pathways are as follows:

Career Pathway One - academic roles that combine teaching, research and administrative duties.

Career Pathway Two - academic roles focusing on research and associated administrative duties.

Career Pathway Three - academic roles focusing on teaching and associated administrative duties.

Clinical Career Pathways - Sub-sets of the other pathways covering roles that also include clinical duties.

This post is located on **Pathway Two**. Role Summaries setting out what is expected of an academic at each particular profile level on pathway two can be found below. Please note that an appointment may be made at any level of the pathway.

A schematic diagram of the career pathways is also attached and further information on career pathways can be found at www.bris.ac.uk/personnel/reward/acadpath

For Pathway Two roles progression to the next level will occur where a role has been identified as being eligible for progression, having reached the relevant point on the salary scale and after the relevant competencies have been attained. A progressable role is a role at Level b or Level c that has been determined as being eligible for progression by the Head of Department, based on departmental needs, priorities and funds. Individuals in progressable roles at Level b or Level c are expected to develop their skills, knowledge and experience in order to ultimately progress to Level c or Level d, as applicable. A non-progressable role is one either at Level a (which are not subject to formal progression arrangements, although there may be opportunities to develop into a Level b role, based on departmental needs, priorities and funds), or at Level b or c for which the Head of Department has identified an ongoing need at that particular level. Movement to Level e will be by promotion only.

Role Summaries

Research Assistant (Level a)

Role holders at this level are concerned with *assisting* an individual research leader or team to conduct a particular study (or group of studies). They will generally be involved in data generation and/or collection using standard and well-defined methods developed by others. They will be working under close supervision by, and direction from, a more senior researcher, who will be ultimately responsible for the project. This may be the entry level for some staff who are expected to train and/or develop to take on more senior researcher roles. Role holders will be provided with academic and pastoral support within the department (including counselling on realistic career opportunities) and training will be available designed to develop their competences and to prepare them to take on more responsibilities associated with a higher grade.

Research Associate (Level b)

Role holders at this level will be experienced and professional researchers (or have considerable professional experience) and will be specialists in a particular area or methodology, drawing upon knowledge gained from postgraduate research and/or working within a Level a role. They will be *associated* with a particular project (or projects) and will contribute ideas, and/or enhancement of techniques or methodologies. They will be expected to do some writing for dissemination outside the Department. They will still be working under supervision, but will be expected to take significant initiatives in their work and consult with the Principal Investigator over the details of the project. They may, where practical, contribute to the department's teaching, through supervision of projects, overseeing practical classes, or taking small group classes. They will be provided with academic and pastoral support within the department and training will be available designed to develop their competences (including counselling on realistic career opportunities) and prepare them to take on more responsibilities associated with a higher grade.

Research Fellow (Level c)

Role holders at this level will have substantial experience of research (normally not less than six years). They will initiate and take responsibility for some research projects and may be Principal Investigators or, where a Research Council does not permit this, act as though they were Principal Investigators. They will be involved in administration relevant to their projects (e.g. helping to prepare bids for research funding), managing other researchers and monitoring research budgets. They will be expected to be undertaking research individually and/or collectively and to be advancing the state of knowledge and understanding within their particular area of expertise. They will be publishing regularly in high quality outlets. They are likely to provide some teaching support for the department (consonant with the terms of their funding). They will be expected to be establishing a growing reputation within their particular research field and academic discipline and to be developing and demonstrating intellectual independence.

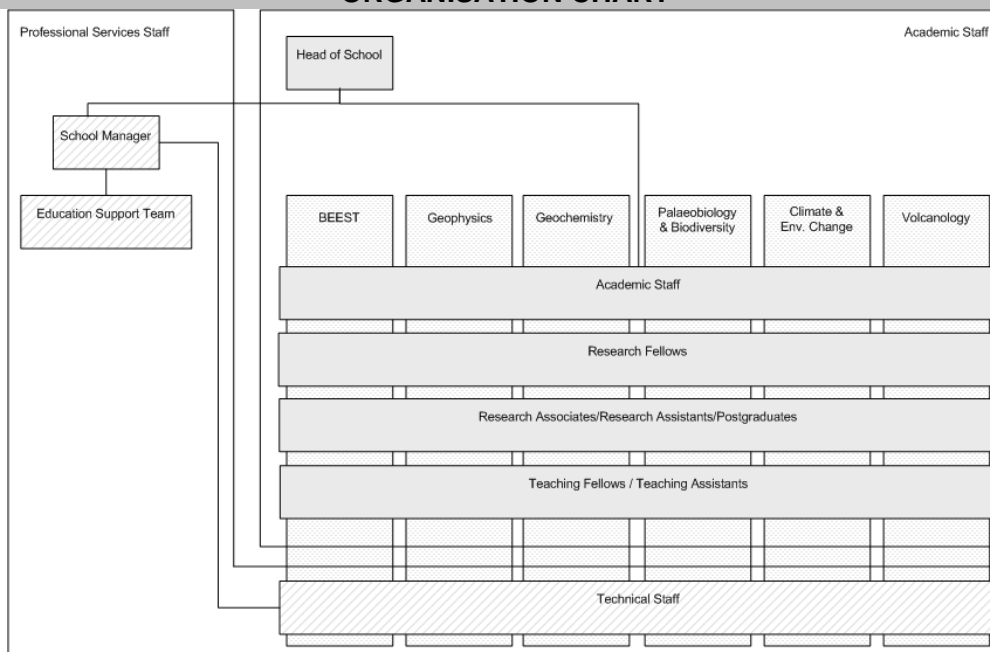
Senior Research Fellow (Level d)

Role holders at this level will have extensive experience in research and research management. They will normally be Principal Investigators, leading collaborative research bids and research teams, or driving forward innovative research themselves. They will be involved in scholastic projects (e.g. editing journals and academic books), and be making a significant leadership and/or management contribution within their department or the wider university, to be participating in national/international academic networks and conferences. They may be transferring their knowledge through some teaching and/or supervision to undergraduate or graduate students (consonant with the terms of their funding). Role holders at this level will be independent researchers and will have an established national and growing international reputation within their academic discipline generally and research field in particular.

Professorial Research Fellow (Level e)

Role holders at this level will have very extensive experience of research leadership and related management/administration. They will enjoy a wide recognition for their expertise within the academic community internationally (as evidenced by conference invitations, journal editorships, office holding in specialist groupings, associations with appropriate Research Councils etc.). They will have made recognised and significant contributions to the developing knowledge and understanding of their research area. They will already have responsibilities for the creation, initiation, development and overall management of significant research programmes. They will 'profess' their discipline within the Department, as appropriate and consonant with the terms of their funding. They may also carry significant leadership roles within the Faculty or University.

ORGANISATION CHART



APPLICATION PROCESS

Please complete the application form on line or download a copy from our web site at www.bris.ac.uk/jobs To access the on line and downloadable versions of the form simply enter the vacancy reference number in the search facility. Alternatively if you have received an application pack, please complete and return the enclosed application form in the envelope provided.

Please note the following:

- We will only be able to consider you for this vacancy if you complete the application form. Whilst you are welcome to include a CV with your application form, a CV alone will not be considered.
- Only include the information requested – copies of qualification, certificates, letters of reference, journal articles and any other additional documents are not required at this stage.
- It is important that you quote the **reference number 16619** on the application form.
- **The closing date for applications is 9.00am. 4 October 2011.**
- We regret that we are unable to write to all applicants regarding the outcome of their application. Therefore, if you have not been invited for interview within four weeks of the closing date, you should assume that on this occasion you have not been successful.

SELECTION PROCESS

It is expected that interviews will be held on 17 October 2011

ADDITIONAL INFORMATION

Contract Type

The successful applicant for this vacancy may be appointed either on a fixed term or a permanent contract depending on the extent of their previous relevant research experience, in line with the University's Fixed Term Contract Agreement. Further information can be found at www.bristol.ac.uk/personnel/ftc/

Changes to Universities Superannuation Scheme (USS)

Following consultation with staff about a review of the Universities Superannuation Scheme (USS), a number of changes to the Scheme are currently being considered. Further information can be obtained from the consultation website: www.ussconsultation.co.uk

Academic Staff Career Pathways

Profile Level

e

d

c

b

a

Pathway One

Pathway Two

Pathway Three

Professor
1e

Professional
Research
Fellow
2e

Professional
Teaching
Fellow
3e

Senior
Lecturer
1d1

Reader
1d2

Senior
Research
Fellow
2d1

Reader
in
Research
2d2

Senior
Teaching
Fellow
3d1

Reader
in
Teaching
& Learning
3d2

Lecturer
1c

Research
Fellow
2c

Teaching
Fellow
3c

Lecturer
1b

Research
Associate
2b

Teaching
Associate
3b

Research
Assistant
2a

Teaching
Assistant
3a

↑ Progression

↑ Progression when role available

↑ Promotion