

1 Advertisement

Post Title: Computational Research Technician

School/department: School of Life Sciences / Genome Damage and Stability Centre

Hours: Part time hours considered up to a maximum of 18 hours per week. Requests for [flexible working](#) options will be considered (subject to business need).

Contract: fixed term until 01 May 2023 or for 6 months

Reference: 9440

Salary: starting at £27,131 to £31,411 per annum, pro rata if part time.

Placed on: 21 September 2022

Closing date: 10 October 2022 Applications must be received by midnight of the closing date.

Expected Interview date: ASAP

Expected start date: 01 November 2022

The [School of Life Sciences](#) at the University of Sussex is at the forefront of research in the UK. In the recent Research Excellence Framework assessment (REF 2021), 100% of our [Impact cases](#) in Biological Sciences and Chemistry were rated as world-leading or internationally excellent. The School has received substantial recent University investment and is embarking on an exciting and extensive, multi-million pound refurbishment and improvement project.

Based in the School of Life Sciences, the Genome Damage and Stability Centre (<http://www.sussex.ac.uk/gdsc/>), is an internationally renowned Institute carrying out research on the response of cells to DNA damage, genome instability and its relationship to disease. We provide a stimulating and supportive environment and our expertise covers a range of experimental systems.

We wish to appoint a Computational Research Technician to support image processing and analysis. The post holder will support the development of image analysis pipelines that include image processing, segmentation, classification and quantification of microscopy data. We are specifically interested in developing new machine learning approaches for cell classification of high throughout imaging data. An overview of research within the cell cycle control lab can be found at [School of Life Sciences](#) <http://www.sussex.ac.uk/lifesci/hoheggerlab/>

The School of Life Sciences is committed to increasing the diversity of its staff and providing an inclusive working environment. The School currently holds an Athena SWAN Silver Award, has developed a Race Equity Action Plan and hosts an active Equality, Diversity and Inclusion working group.

Applications are particularly welcomed from Black and minority ethnic candidates, and women, trans and non-binary candidates, who are under-represented in the School of Life Sciences.

Applications to posts from candidates who wish to work part-time or as job-sharers are welcome.

The University offers various schemes to provide real benefits to parents, these can be found at [Family Friendly Policies](#)

Potential candidates are strongly encouraged to make informal contact with Helfrid Hochegger (hh65@sussex.ac.uk; [he, him]) before applying.

*Applications should be accompanied by a full CV, a statement of research interests and aspirations (not more than 4 pages), and the names of three academic referees.
[Optional]*

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.

“Please note that this position may be subject to [ATAS clearance](#) if you require visa sponsorship.”

For full details and how to apply see our [vacancies page](#)

The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.

Please note: The University requires that work undertaken for the University is performed from the UK.

2. The School of Life Sciences

The [School of Life Sciences](#) has a mission statement to understand the mechanisms that drive biological and chemical processes; to develop innovative and diverse approaches to enhance human health, technology and the environment. It undertakes research, teaching and engagement across a wide range of the Life Sciences, from Chemistry through a range of biological and medically-related areas to Conservation Biology. The breadth and depth of cutting-edge research and innovative teaching practice requires a diverse community who work across boundaries to deliver excellence. Multidisciplinarity is a key strength at Sussex, and the School of Life Sciences is part of two collaborative cross-School funded Strategic Research Programmes: Sussex Neuroscience (SN) and the Sussex Sustainability Research Programme (SSRP). Sussex Neuroscience brings together broad-ranging neuroscience approaches from the Schools of Life Sciences, Psychology, Engineering and Informatics, as well as the Brighton and Sussex Medical School. SSRP brings together Life Sciences, Global Studies and the University of Sussex Business School to address the United Nations sustainable development goals.

The School of Life Sciences is the largest in the University in terms of research activity, with an annual research income of around £13 million. The School has a teaching and research faculty of around 90, over 140 research staff, and an administrative team of around 20. The School is structured into five Departments led by a Head of Department. These are Biochemistry & Biomedicine, Genome Damage and Stability Centre, Neuroscience,

Evolution, Behaviour & Environment and Chemistry, working closely with the Sussex Drug Discovery Centre. The Head of School Professor Sarah Guthrie leads the Head of School Executive, which includes two Deputy Heads of School (one focussed on research and enterprise, the other on education), the School Administrator and the Director of Technical Services. Wider School organisation and administration is overseen by the School Management Committee, which includes the Heads of Departments and others in Directorship roles.

Our School aims to develop scientists that are able to connect with global issues and develop innovative solutions to the challenges that face the planet. We therefore work to ensure that our research positively impacts our local community, the economy and society as a whole. We have and continue to develop relationships with business, policy and community partners ranging from local SMEs to large scale multinational organisations. Academics, researchers, and students at all levels are encouraged to engage with non-academic partners through activities such as technology and skills sharing, licencing IP, contract research or consultancy, working closely with colleagues in the Sussex Innovations and Business Partnership team.

In the recent Research Excellence Framework (REF2021), 90.6 % of our Biological Sciences outputs and 84.8% of our Chemistry outputs were rated as world-leading or internationally excellent. In both areas, 100% of our [Impact cases](#) were rated as world-leading or internationally excellent. We are proud that our research has diverse impact that includes enabling and enhancing diagnosis of cancer and rare genetic diseases, using novel chemical methods to produce new medicines, saving endangered species, influencing policy and practice in pesticide use to protect bees and establishing conservation, economic and health initiatives in Papua New Guinea and Ecuador.

Our vibrant post-graduate research community is made up of around 130 PhD students who are key to our success, undertaking cutting-edge research across all our areas of interest in the Life Sciences. We are part of a number of cross-School and multi-partner PhD programmes: the Sussex Neuroscience PhD programme, 2 Leverhulme-funded Doctoral Scholarship programmes (*Sensation and Perception to Awareness* and *Biomimetic Embodied AI*), the UKRI funded *UK Food Systems Centre* for Doctoral Training and the BBSRC *South Coast Biosciences (SoCoBio)* Doctoral Training Partnership.

The School's teaching is firmly based on our research excellence and offers students an intellectually stimulating and supportive experience, with opportunities for personal research experience and use of modern technology to enhance learning. The School has a population of around 1500 undergraduates studying a [range of subjects](#) across the School's expertise. For each degree we offer a 3-year BSc and a 4-year integrated Masters (MSci or MChem). We also offer a Life Sciences Foundation Year, which is ideally suited for students whose A-level (or equivalent) qualifications don't meet the requirements for direct entry on to our BSc/MSci degrees. We have a population of around 85 postgraduate taught students undertaking [MSc or MRes courses](#) across our subject expertise.

The School is committed to the [University's core values](#) of kindness, integrity, inclusion, collaboration and courage. The Equality, Diversity and Inclusion Committee (with representation on the School Management Committee) promotes and encourages our values across the School, [championing initiatives](#) that meet the [University's goals](#) of being Equal, Diverse, Accessible and Flexible. We currently hold an Athena SWAN Silver Award and have a BAME Awarding Gap Committee who closely liaise with the University's Race Equality Charter committee. The School also hosts a wellbeing room and a multi-faith prayer room within its estate and the University supports the [Trans Rights are Human Rights](#) UK initiative. We believe that equality, diversity and inclusion is everyone's business and aim to provide a friendly and supportive environment for all who work, study and visit the School of Life Sciences.

GENERIC ROLE PROFILE

| | |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Job Title: | Assistant Specialist Technician – [Data Science] |
| Grade: | G5 |
| School/Division: | [Life Science] – Technical Services |
| Location: | [Genome Centre] |
| Responsible to: | [Helfrid Hochegger, Reader] |
| Direct reports: | [n/a] |
| Key contacts: | [Helfrid Hochegger, Reader]. |
| Role description: | To provide and oversee the delivery of effective high-quality research support within a specialist division of the cell cycle control laboratory, relating to image processing and analysis |

PRINCIPAL ACCOUNTABILITIES

In relation to a range of named services or processes, to:

1. To be responsible for the delivery of technical support activities associated with specialist research across the equivalent of a departmental/School wide area to ensure that provision is of an excellent quality and delivered in a timely, professional fashion.
2. Maintain, publish and disseminate information and appropriate communications to ensure services and processes are understood, utilised and applied
3. To act as the main point of contact for service users in the effective and efficient delivery of technical services.
4. Provide support for quality assurance and staff and/or student feedback activities including reporting on usage and uptake information.

KEY RESPONSIBILITIES

- To exemplify good working practice to achieve departmental objectives, in line with local policy and procedure, assist with the planning, scheduling and delivery of activities, events and meetings including, but not limited to;
 - Helping to ensure that timelines and resources are identified, realistic and achievable
 - Proactively raising issues arising in advance for discussion and resolution

- Co-ordinating the delivery of activities according to the schedule and in liaison with managers responsible for delivery
- To act as an ambassador for the service, with a focus on customer service and delivery.

1. Communicating effectively with all stakeholders

- Contributing to the editing of local guidelines ensuring that content relating to own areas of responsibility is clear and understandable to readers, up to date and accessible
- To deliver training (e.g. data logging, production work, equipment usage and techniques) to students, technicians and other demonstrators and provide day to day advice, supervision and demonstrating as required.

2. Providing support, information and guidance to staff and students.

- To be the first point of contact in answering incoming queries in a helpful and timely way and in line with service level agreements/KPIs, providing explanations where necessary and knowing when to escalate queries
- Providing guidance on relevant procedures and processes
- Ensuring staff and students are aware of procedures and processes

3. Liaising with colleagues with similar areas of responsibility and being actively involved in team meetings, networks, attending meetings, sharing information and contributing to the development of processes

4. Creating and maintaining accurate information on activity that has taken place

- Creating comprehensive records and files for future reference
- Providing usage and uptake reports as requested
- Where required, to ensure staff and students working within specialist areas have received safety inductions and safety critical training according to Standard Operating Procedures, and that this is recorded.

5. There may be responsibility for recharging and/or a small budget.

6. Key Responsibilities

- Provide expertise and advice on current and emerging tools to be used in research and teaching in order to assist with the development of the school technical research or teaching strategy.
- Maintain the technical web pages for the school and ensure any/all changes to policy (School and University) are accurately reflected in a timely manner
- Provide support for setting up and using specialist equipment
- Advise and assist on the development, construction, assembly and application of equipment and techniques
- Carry out basic risk assessments as required under the direction of the Technical Manager and ensure these are reviewed and revised as/when required.
- Procure equipment and software as required/directed by the (Senior) Technical Manager. Ensure accurate inventory is maintained and that all required subscriptions/licenses are in place and remain up to date.

- Developing code for image pre-processing
 - Developing code for image segmentation
 - Developing code for image classification
 - Developing code for image feature extraction and quantification
7. To maintain specialist areas and the associated teaching and research materials by overseeing and participating in upkeep of allocated equipment including servicing (by external engineers if required), housekeeping, data recording, waste management, stock keeping, ordering and to ensure that local safety requirements are in place. This may include administration of the Permit to Work system.
 8. Support achievement of the Division's/Unit's/School's compliance with all applicable statutory and regulatory compliance obligations, including (but not limited to): UKVI, Health & Safety, the Prevent Duty, data protection, Competition and Markets Authority requirements and equal opportunities, as appropriate to the grade and role. Additionally, to promote good practice in relation to University policy, procedure and guidance in relation to those compliance matters in respect of students, staff and other relevant parties.

To carry out any other duties that are within the employee's skills and abilities whenever reasonably instructed.

This Job Description sets out current responsibilities of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- Responsible for setting up new Linux station to perform analysis of high content imaging data.
- Responsible for the achievement of development of fast and robust image analysis pipelines for high content screening data.

PERSON SPECIFICATION

ESSENTIAL CRITERIA

1. Usually educated to Level 3 - NVQ Level 3, BTEC award, certificate and diploma level 3, GCE AS and A Level, Advanced Diplomas (England)
2. Effective planning and organisational skills to organise own workload and priorities.
3. Effective oral and written communications skills to work with colleagues and customers providing information and responding to questions and queries.
4. Ability to work flexibly within a small team and also on own initiative.
5. Competent IT skills to effectively manage own workload – MS Suite. Or other IT software relevant to role.

6. Technical work experience relating to the area/department, acquired in relevant roles and job-related training
7. Able to develop understanding of long-standing and complex problems and to apply professional knowledge and experience to solve them.
8. Knowledge of health and safety procedures and practices relating to relevant area

ESSENTIAL ROLE-SPECIFIC CRITERIA

1. Relevant technical experience, acquired in relevant roles and job-related training
2. Ability to interpret guidelines, Standard Operating Procedures and Risks Assessments
3. Proven experience in software development using Python
4. Familiarity with Python Scipy, SKlearn and Pytorch packages
5. Proven experience with analysis of microscopy data using Python

DESIRABLE CRITERIA

1. Desirably educated to Level 4 - BTEC Professional award, certificate and diploma level 4, Higher National Certificates (HNC), Certificates of Higher Education (CertHE)
2. Supervision of trainees/students/contractors undertaking practical's/work tasks.
3. Sufficient experience to advise and assist on the development, construction, assembly and application of equipment and techniques
4. Familiarity with advanced machine learning algorithms