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Appointment of a Research Fellow in Marine Fuels for the Future. (1.0 full-time equivalent)

**The Job**

At Research Fellow level (AC2), staff are expected to be involved in the developing, planning and managing of research projects in consultation with a Principal Investigator, developing a publication record and learning to generate funding and supervise less experienced researchers. The role will normally require a level of research knowledge, skill, and experience equivalent to PhD. Research Fellows may also be expected to contribute to the teaching and/or consultancy activities to ensure continuous development of knowledge in the subject area.

The role will involve the following range of activities:

* develop research objectives and proposals for their own or joint research, initially with the assistance of a mentor if required.
* conduct individual and collaborative research projects.
* continually update knowledge and understanding in the field; and translate knowledge of advances in the subject area into research activity.
* contribute to writing up research work for publication or dissemination of research findings including presenting at conferences and/or other appropriate events.
* contribute to the supervision and mentoring of research students and make some contribution to the teaching, tutoring, and learning programmes in the school.
* prepare proposals and applications to external bodies, e.g., for funding and accreditation purposes.
* liaise with colleagues and students.
* build internal contacts and participate in internal networks to exchange information and form relationships for future collaboration.
* join external networks to share information and identify potential sources of funds.
* agree and largely self-manage research and administrative activities, ensuring own research is undertaken according to governance, ethical and quality assurance guidelines.
* collaborate with academic colleagues on areas of shared research interest.
* work with colleagues on joint proposals as required; and attend and contribute to relevant meetings.
* use new research techniques and methods, develop new ones, and extend the research portfolio.
* identify areas of research and generate ideas associated with research.
* analyse and interpret research data and draw conclusions on the outcomes; and contribute to collaborative decision-making in areas of research.
* plan and manage own research activity and use of resources in collaboration with others and help to plan and implement third stream commercial and consultancy activities.

**Person Specification**

It is expected that the essential criteria below regarding knowledge and qualifications will be met by the successful candidate.

**Essential**

* A degree in Engineering, Physics, or in any other relevant discipline
* Up to date breadth or depth of specialist knowledge in emerging fuels.
* Up to date breadth or depth of specialist knowledge of advanced engines.
* Knowledge of analysing chemical process reactions in fuels.
* Ability to work as an effective member of a team.
* Competent IT skills, and ideally effective use of IT for teaching and learning.
* Understanding of equality of opportunity, academic content and issues relating to student need.

**Desirable**

* A relevant PhD in Engineering, Physics, or in any other relevant discipline or an equivalent level of professional experience.
* Experience in the development and application of chemical kinetics solutions using Ansys CHEMKIN or comparable chemical process reaction simulations.
* Experience of using engine testing facilities and optical measurement techniques for studying combustion.

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* The Advanced Engineering Centre (AEC) is seeking a highly motivated Research Fellow with a proven expertise in emerging fuels and advanced engines.
* The post is funded by a prestigious project granted by the Engineering and Physical Sciences Research Council (EPSRC) and the Department for Transport (DfT) entitled ‘UK National Clean Maritime Research Hub’.
* This is a 4-years project (value >£23M) bringing together over 80 university, industrial, civic and international organisations as project partners, including shipping companies, ports, equipment and service providers, fuel producers and civic bodies.
* The Hub will carry out innovative research in sustainable marine fuels and their safe use, low-carbon power and propulsion systems for shipping, decarbonised port operations and infrastructure, improved maritime operations and vessel efficiency.
* The Fellow will play a fundamental role in the project as they will be responsible for:
	+ Developing and applying chemical process reactions for potential maritime fuels of the future; and
	+ Determine and validate optimal combustions of these using optical measurement techniques.
* The appointment is for a fixed term of 36 months due to the funding made available by the EPSRC grant.
* The appointment is generally made at the bottom of the range dependent upon experience and previous salary.
* The annual leave entitlement is 35 working days, pro rata for proportional (part-time staff). This is in addition to the statutory holidays applicable in England, local discretionary holidays, and days when the university is closed in the interests of efficiency.
* Hours –This post is full-time. The nature of teaching posts is such that staff are expected to work such hours as are reasonably necessary to fulfil their duties and responsibilities. It would therefore be inappropriate to define the total hours to be worked in any week. A reasonable norm for full-time staff, however, having regard to the contractual position of other senior staff in the institution, would be thirty-seven hours, although this should not be regarded as a minimum or maximum.
* More information about the university and the school can be found by following the links below:
	+ [Welcome to the Advanced Engineering Centre (brighton.ac.uk)](https://www.brighton.ac.uk/aec/index.aspx) Advanced Engineering Centre
	+ <https://www.brighton.ac.uk/about-us/contact-us/academic-departments/index.aspx> Academic departments
	+ <https://www.brighton.ac.uk/research/index.aspx> Research and Enterprise at the University
	+ [Professional services departments (brighton.ac.uk)](https://www.brighton.ac.uk/about-us/contact-us/professional-services-departments/index.aspx) Professional services departments
	+ [University strategy 2019–2025 (brighton.ac.uk)](https://www.brighton.ac.uk/practical-wisdom/index.aspx) University’s Strategy 2019 - 2025
* The University has an attractive range of benefits and you can find more information in the [Working here (brighton.ac.uk)](https://www.brighton.ac.uk/about-us/working-with-us/jobs/index.aspx) section of our website which includes information on Equality, diversity and inclusion and Benefits and facilities.

**Job sharing**

The University of Brighton welcomes job sharers. Job sharing is a way of working where two people share one full-time job, dividing the work, responsibilities, pay, holidays, and other benefits between them proportionate to the hours each works, thereby increasing access to a wide range of jobs on a part-time basis. The advert for the post for which you are applying will indicate whether applications from job sharers can be considered (this may not be possible for a post that is already part time for example) and further information can be found on the ‘Balancing Working Life’ section here [Benefits and facilities](https://www.brighton.ac.uk/about-us/working-with-us/jobs/benefits-and-facilities.aspx).

**Professional development**

The Research Office organises a wide range of workshops covering all aspects of researcher development including research degree supervision, research methodology, writing successful bids for funding, intellectual property and negotiations and contracts. The Research Office also offers a co-ordinated central service to advise and assist university research staff applying for grants from UK Research Councils, the European Commission, the NHS, and similar external bodies including advice and guidance on application procedures, regulations, staffing, costing and protection of intellectual property. The Research Office’s website offers a wide range of helpful information on all aspects of research. [Research and knowledge exchange (brighton.ac.uk)](https://www.brighton.ac.uk/research/index.aspx)

Date: 23 January 2024