

Post Description

Post	Research Assistant	Position no:	15689
College / Directorate / Research Institute	College of Engineering Design & Physical Sciences Department of Mechanical and Aerospace Engineering Institute of Energy Futures		
Salary	Grade R1		
Contract type	Fixed-Term up to 12 months		
Full time/Part time	Full time		
Accountable to	Xinyan Wang		
Reports	Xinyan Wang		
Internal stakeholders	PhD students, academics, researchers and technical staff in the Centre for Advanced Powertrain and Fuels.		
External stakeholders			
Date reviewed	Feb 2024		

Main accountabilities:

- To set up a diesel pilot ignited hydrogen/ammonia dual fuel engine.
- To investigate diesel pilot ignited hydrogen/ammonia engine by thermodynamic engine experiments and 1D engine modelling.
- To work closely with research partners.
- To disseminate research outcomes and results of the project (international journals and conference publications etc.)
- To assist in the supervision of PhD students and other researchers in the Advanced Powertrain and Fuels Theme.

Key duties and responsibilities:

1. Carry out experimental studies of diesel pilot ignited hydrogen/ammonia dual fuel engine.
2. Contribute to the following objectives:
 - To set up a diesel pilot ignited hydrogen/ammonia dual fuel engine
 - To perform thermodynamic experiments of dual fuel engine
 - To perform 1D engine modelling
3. The duties for this post include:
 - Perform relevant research work.
 - Maintaining an up-to-date awareness of relevant background literature to support the research activities.
 - Preparation of project progress reports in a timely manner.

- Preparation of high-quality research papers for publication in refereed scientific journals and conference proceedings.
- Preparation and delivery of presentations at internal seminars and project progress meetings, and at national and international conferences.
- Hold regular meetings with supervisor and other team members to report research progress.
- To keep a close interaction with team members and external research partners associated to this project.

Post Profile

- Perform engine experiments and modelling
- Acquiring and interpreting research data and results
- Prepare and present at regular research project meetings
- Prepare and publish scientific journal papers and presentation at international conferences

Management of Staff and Students (Responsibilities and Accountability)

- To provide appropriate advice to staff and students on their research area or research methodologies

Effective Behaviours

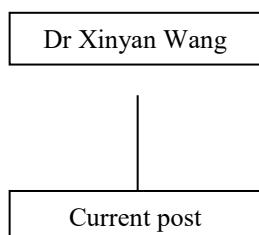
- Timeliness
- Meeting Deadlines
- Communication and Networking
- Networking group across colleges
- Ability to negotiate and influence
- Ability to plan and organise own workload
- Ability to adapt to a flexible approach to the demands of a busy college/department in order to accommodate changes in priorities when required

University Employment Policy:

1. Undertake any other reasonable duties as required and commensurate with the grade of post.
2. Adhere to and comply with the provisions of the Data Protection Act and the Health and Safety at Work Act in accordance with University policies.
3. Undertake all duties and responsibilities in compliance with the rules and regulations encompassing equal opportunities to help foster a diverse workforce.
4. Adhere, comply and work in accordance with University and Departmental policies, procedures and codes of conduct.
5. Promote the University's Environmental Policy and demonstrate commitment to it through actions and decision making.
6. Actively participate in on-going professional development activities as requested

Organisational Chart

The organisational chart comprises of the role, the manager of the role and any direct reports to the role.



Disabled applicants meeting the Essential criterion will be guaranteed an interview as part of the University's commitment to the Disability Confident Scheme.



Person Specification

Attributes	Criteria	Essential /Desirable	How measured
Education, qualifications & training	A degree or equivalent – (appropriate for PhD registration) in experiments of IC engines OR Attained equivalent research, industrial or commercial experience. (Minimum 4 years).	E	Application form
	Evidence of research attainments including examples of written contributions in academic publications/journals.	E	Application form
Experience	Evidence of IT literacy including Excel and databases.	E	Application form, Interview
	Provide evidence of independent, original research.	E	Application form, Interview
	Experience of organising and supervising a project team	D	Application form, Interview
	Proven experience of planning research, preparing research proposals and negotiating contracts with little supervision.	D	Application form, Interview

	Engine experiments	E	Application form, Interview
Knowledge Skills & Abilities	Evidence of current knowledge in the subject area	E	Application form, Interview
	Demonstrate ability in acquiring and Interpreting research data and results	E	Application form, Interview
	Ability to compile reports and give/participate in academic presentations	E	Application form, Interview
	Ability to draft research papers for Publication in appropriate academic journals and conference proceedings	E	Application form, Interview
	Good communication and interpersonal skills	E	Application form, Interview
	Ability to work largely on own initiative with minimum supervision.	E	Application form, Interview
Additional Requirements (not included above)			

Job Hazard Assessment Form (JHF)

This form is completed by the Recruiting Manager as part of the Job Description as it is essential that any identified hazards have undergone appropriate Risk Assessments. The Health & Safety office should be contacted for advice if required.

Job description attached (must incorporate identified hazards)			
Please tick all relevant workplace hazards identified with this position. Currently the University, as a minimum runs Health Surveillance programmes for staff working with skin and respiratory sensitizers, Biological Agents Class 2 and above and GMOs.			
<input checked="" type="checkbox"/> Display screen equipment	<input type="checkbox"/> Manual handling	<input type="checkbox"/> Prolonged standing e.g. 1 hour plus	<input checked="" type="checkbox"/> Prolonged sitting e.g. 1 hour plus
<input type="checkbox"/> Biological agents: Class 2 and above and GMO Class 1	<input type="checkbox"/> Human blood, tissue or fluids	<input type="checkbox"/> Respiratory sensitizers or laboratory allergens e.g. animals	<input type="checkbox"/> Skin Irritant/Chemicals
<input type="checkbox"/> Work in confined places	<input type="checkbox"/> Ionising radiation	<input type="checkbox"/> Noise (more than 80 dba-8 hrs. law)	<input type="checkbox"/> Lone working
<input checked="" type="checkbox"/> Use of dangerous machinery	<input checked="" type="checkbox"/> Electrical hazards	<input type="checkbox"/> Shift work/night work	<input type="checkbox"/> Work outdoors
<input type="checkbox"/> Neck & arm vibrating equipment	<input type="checkbox"/> Fork lift truck driving	<input type="checkbox"/> Work at heights	<input type="checkbox"/> Lasers
Any other hazards (e.g. food handling) please specify and ensure that appropriate guidance has been received from the Health & Safety office:			
Physical demand of the job:	<input type="checkbox"/> Lifting <input type="checkbox"/> Carrying <input type="checkbox"/> Bending <input type="checkbox"/> Pushing		
If lifting/carrying duties expected, please give details of heights/weight load(s) the individual is expected to lift/carry and frequency:			
Travel/Off-site working:	% of time:	<input type="checkbox"/> UK	<input type="checkbox"/> Overseas
Driving for work:	<input checked="" type="checkbox"/> None/Occasionally	<input type="checkbox"/> Daily	<input type="checkbox"/> Weekly
Management responsibility:	<input type="checkbox"/> Supervisor		<input checked="" type="checkbox"/> Non-supervisory
Hours of work:	<input checked="" type="checkbox"/> Full time		<input type="checkbox"/> Part time hours
<input type="checkbox"/> Non-standard contractual hours? (evenings/weekends)		<input type="checkbox"/> Night work	
Frequency, number of hours, type of work outside standard hours:			
Other – including occasional or possible work hazards (please specify nature and frequency):			

The hazards outlined in this form are all subject to prior departmental risk assessment and may also be subject to provision of health surveillance, immunisation or training organised initially by the manager by contacting the Health and Safety Department and/or Staff Development. As the line manager, you are responsible for ensuring that the Health and Safety Induction and appropriate risk assessments for new employees are carried out (as required). The Induction will cover the arrangements for Health and Safety Management at Brunel University London, to ensure that all new employees are aware of the risks from work activities and their environment and establish the means by which those risks are avoided or minimised.

I confirm that the appropriate risk assessments have been undertaken and relevant advice received from the Health & Safety office and that these are fully outlined in the Job Description/Person Specification:

Printed name.....Xinyan Wang.....

Signed.....Xinyan Wang.....Date..... 28/4/2024.....