School of AACME

Research Associate in Vehicle Emission modelling

Job Ref: REQ250121

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

Project Description

Project Title: Air Quality Analysis and Prediction Tool due to Road Vehicle

Carry out literature review on vehicle emission modelling and its effect on air quality,
Study the environmental impact of competing road transport technologies (different powertrains) on Life Cycle basis to find/show most pragmatic pathways to meet WHO Air Quality (local & global) standards to achieve zero pollution.
Translate this knowledge to develop an Air Quality modelling tool which is used to carry out the analyses for assessing the impact of different transport technologies* on Air Quality.
Determine the socially optimal combination of automotive and related (e.g. fuel and power sector) policies to minimize environmental impacts from the studied passenger vehicle fleets, using a decision making platform.

Job Description

Job Grade: Specialist and Supporting Academic Grade 5

Job Purpose
To conduct research in the field air quality monitoring and literature review on the vehicle emission modelling and its effect on air quality

Job Duties

- To carry out background search on vehicle emission
- To conduct a literature review on air quality due to emission
- To find the details of the existing air quality monitoring projects
- Write report / Collate data on published data research projects

Points To Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

Organisational Responsibility

Reports to Lisa Jackson

Person Specification

Your application will be reviewed with respect to meeting the essential and desirable criteria listed below.
Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

1 – Application
2 – Test/Assessment Centre/Presentation
3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Background in automotive engineering	1
	Some experience in vehicle modelling and simulation	1
	Knowledge in system engineering and emission monitoring	1
	Experience of writing project reports	1
Skills and abilities	Project specific skills in literature search	1
	Project specific skills in data analytics	1
	Excellent written and oral communication skills	1
	Self-motivated with ability to meet deadlines	1
	Excellent interpersonal, and organisational skills	1
	Working knowledge of software packages [Simulink, MATLAB]	1
	Working knowledge of specific analytical, numerical methods [data mining, OBD tools]	1
	Ability to write project reports and make technical presentations to industrial and academic research groups	1
	Knowledge of relevant Health & Safety issues	1
Training	Demonstrate evidence of having undertaken further training	1
Qualifications	MSc	1
Other	Commitment to observing the University's Equal Opportunities policy at all times.	1

Desirable Criteria

Area	Criteria	Stage
Experience	Experience of air quality measurement	3
	Further project specific experience of digital twins	3
Qualifications	PhD (or near completion)	3
Other	Able to travel Independently	3

Conditions of Service

The position is Part Time, temporary . Salary will be on GRADE SSA5 £29,179 - £38,249 per annum, at a starting salary to be confirmed on offer of appointment.
The appointment will be subject to the University's Terms and Conditions of Employment for STAFF GRADES 1-5 details of which can be found here.

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which can be found here.

The University offers a wide range of employee benefits which can be found here.

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html

In addition, the University is supportive, wherever possible, of flexible working arrangements.
We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see http://www.lboro.ac.uk/services/hr/athena-swan/