Research Assistant in Transport Microgrid Sizing

Department	Electronic and Electrical Engineering (www.strath.ac.uk/engineering/electronicelectricalengineering/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Research	Reference No	625115
Reports To	The Head of School/Department, through Prof. Stuart Galloway	Grade:	6
Salary Range:	£31,396 - £34,980	Contract Type:	Fixed Term (3 months)
FTE	0.6 (21 hours/week)	Closing Date	22/06/2024

Job Advert

The Department of Electronic and Electrical Engineering seeks a Research Assistant (RA) to support the activities of the electrical system in transportation team. This role will support ongoing research activities linked with the integration of high-powered electric vehicle (EV) charging within existing electrical distribution networks.

The RA will play a crucial role in supporting the deployment of innovative technology solutions aimed at maximising the use of existing grid infrastructure and related assets. These solutions are being considered to facilitate high-powered EV charging in grid-constrained areas, potentially reducing grid energy imports and associated operating costs.

The successful candidate will contribute to the following key activities:

- Development and Implementation: Assisting in the conceptual design of integrated charging micro-grids that decouple EV charging power requirements from the grid. This includes supporting the modelling of high-powered EV charging, battery storage, and on-site renewable generation.
- Modelling and Analysis: Supporting the development of scalable models to represent vehicle behaviour, renewable generation resources, and electrical systems. Conducting integrated system studies to aid decision-making on asset sizing, ensuring the designed system meets expected service levels.
- Knowledge Sharing: Contributing to knowledge dissemination through workshops, online resources, and direct stakeholder engagement. This includes supporting the development of learning outputs such as case studies.

Under the guidance of the project lead, the RA will work in culturally diverse teams and support activities linked to technical research, workshop design and delivery, and the development of knowledge outputs for online publication.

To be considered for the role, you will be educated to honours degree level in a relevant discipline (e.g. engineering or related numerate disciplines) or have significant relevant experience in a similar role. You will have the ability to work well as part of a team and possess excellent verbal and written communication skills. You will be capable of high-level problem solving and able to work on your own initiative.

Job Description

Main Activities/Responsibilities:

1.	Support technical modelling activities in relation to vehicle behaviour, renewable generation resources, electrical systems, and battery storage.
2.	Assisting in the conceptual design of integrated charging micro-grids, ensuring EV charging power requirements are decoupled from the grid.
3.	Collecting and managing relevant data from project stakeholders, and published sources to support modelling and analysis efforts.
4.	Plan and manage own workload, with guidance from colleagues as required.
5.	Write up results of own work activities and contribute to the production of project reports and research publications.
6.	Prepare technical presentations to support dissemination of work at conferences, workshops, online resources and project meetings
7.	Contribute to the planning of the existing programmes, including contributing to the identification of future opportunities for new projects and assisting with writing funding proposals
8.	Assist with professional and knowledge exchange activities as required
9.	Represent the University of Strathclyde at project meetings and participate in external presentations as required
10.	Support the supervision of student projects related to the area of work.

Person Specification

Educational and/or Professional Qualifications (E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)	
E1	Educated to honours degree level in a relevant discipline
D1	Membership/working towards membership of relevant Chartered/professional bodies (including Higher Education Academy).
Experience	
E2	Sufficient breadth or depth of knowledge in the relevant disciplines to effectively contribute to the research programmes.
E3	Experience of technical modelling to represent complex systems
D2	Previous publications, conference papers, major reports, and non-technical writing.
Job Related Skills and Achievements	
E4	Excellent verbal and written communication skills with an ability to interact with a range of stakeholders
E5	Good analytical and problem-solving skills.
E6	Excellent IT skills and Project Management skills
D3	Experienced in the use of off-grid energy system modelling and analysis
Personal Attributes	
E7	Organised and self-motivated, with the ability to prioritise own workload and deliver to deadlines
E8	Good interpersonal skills with the ability to build successful working relationships
E9	Ability to work effectively as part of a small team

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (http://www.strath.ac.uk/hr/workforus).

Informal enquiries about the post can be directed to Professor Stuart Galloway (stuart.galloway@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to the Research staff category can be found at: Conditions of Employment.

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found here.

Probation

Where applicable, the successful applicant will be required to serve a 9 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from Payroll and Pensions.

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interviews

Informal interviews are scheduled to be held on 27/06/2024.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. Our Values have been derived from how we act and how we expect to be treated as part of Strathclyde.