

Research Role Profile

Addendum to Role Profile

Job Title:	Research Fellow (1A)
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Job Summary and Purpose:

This information sheet should be read in conjunction with the accompanying generic Research RA1A Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:

- Enhance a vehicle simulator through the design of surrogate models of electric vehicle components for performance analysis at vehicle level and vehicle control applications
- Develop digital twins of the vehicles' systems and sub-systems
- Support the development of a distributed hardware in the loop testing system
- Development, implementation in real-time units and testing via hardware in the loop and vehicle prototypes advanced powertrain and chassis control algorithms, exploring also the use of AI techniques.

Main Responsibilities/Activities

- To undertake a range of research activities – both, practical and theoretical – focused on the development and implementation of the control algorithms and the simulation/digital twin components. This will include programming, critical evaluation and interpretation of the simulation and experimental results, computer-based data analysis and evaluation or library research.
- Assuming responsibility for research tasks and making use of new research techniques and methods, in consultation with the research team.
- Write up of results and document findings in appropriate formats, including the preparation of papers for submission to relevant journals and conferences, and other outputs as required.
- To carry out administrative tasks associated with the project, for example, risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control.

These duties provide a framework for the post and should not be regarded as a final list. Other reasonable duties may be required consistent with the grade of the post.

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Person Specification

The post holder must have:

- a doctoral degree in a relevant discipline (individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on several years' experience in relevant fields.
- experience with experimental data collection, critical analysis and interpretation of results.
- good time management and planning skills with the ability to meet deadlines.
- good written and verbal communication skills and strong interpersonal skills.

The post holder must be:

- able to work independently.
- capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.
- Help maintain a safe working environment by:
 - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand.
 - Following local codes of safe working practices and the University of Surrey Health and Safety Policy.
- Undertake other duties within the scope of the post as may be requested by your Manager.