

Research Role Profile

Job Title:	Research Fellow A
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Responsible to:	Head of research group, or principal investigator
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Responsible for:	Not applicable
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Job Summary and Purpose:
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

Main Responsibilities/Activities
<p>To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research.</p> <p>Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research.</p> <p>Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity.</p> <p>To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, 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.</p> <p>To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.</p> <p>The post holder may occasionally be required to supervise more junior research staff.</p>

Research Role Profile

Person Specification

The post holder must have:

A doctoral degree in a relevant discipline (although 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 a number of years experience in specified / relevant fields

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

Relationships and Contacts

Direct responsibility to the principal investigator or academic supervisor. The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

Special Requirements

To be available to participate in fieldwork as required by the specified research project

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 such other duties within the scope of the post as may be requested by your Manager.

Addendum to Role Profile

Job Title:

Research Fellow (1A)

Job Summary and Purpose:

Research Role Profile

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:

- Development of advanced vehicle control algorithm also leveraging predictive health models for electric components
- 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.
- 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

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.