

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>

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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.

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Addendum to Role Profile

Job Title:

Research Fellow (1A) in Electronic Systems for Independent Living

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:

We seek a Research Fellow in Sensor Systems for Independent Living, beginning 1 July 2023 or soon after, for a maximum of 15 months. The Fellow will take a leading role in the design, realization and testing of novel presence, position and fall detection sensor arrays as part of the [Multifunctional Flooring: Design for Independent Living](#) research project. The work, overseen by [Dr Radu Sporea](#) will be carried out at the [Advanced Technology Institute](#), within the [Faculty of Engineering and Physical Sciences, University of Surrey](#) and benefit from frequent interactions with industrial experts in the form of advisory meetings from technical project partners.

The successful candidate will have a background in designing and deploying microcontroller-based systems focused on touch, presence and position monitoring. A doctoral degree is welcome, as is experience of signal processing, conventional and AI-based event classification, communications and data visualisation. A proven track record supported by academic publications or physical systems previously deployed will be essential for efficient delivery of the work programme.

You will be joining a [diverse and welcoming team](#), in a professional, yet relaxed work environment where the focus is placed on facilitating meaningful outcomes, continuous development and wellbeing. Apart from conducting the research and publishing the results, tasks will also include assisting the Academics with research proposal writing and contributing to the team's award-winning teaching track record. Significant interaction with project partners is encouraged, and the dissemination strategy may involve national and international travel, with many personal development opportunities. All team members are welcome to contribute to related projects in printed and flexible electronic. Numerous UK and international collaborations present important mentoring and career development prospects.

The University of Surrey is a global university with a world-class research profile and an enterprising spirit, located in one of the safest counties in England, within 35 minutes of London by train and minutes away from the Surrey Hills, an Area of Outstanding Natural Beauty. Recent investments have seen the opening of a world-class Sports Park and important updates to central facilities.

The Advanced Technology Institute (ATI) is a leading multidisciplinary research facility in the fields of nanotechnology, energy, quantum and large area electronics. ATI research

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facilities include the recent Graphene Centre, and the joint Surrey - National Physical Laboratory labs in the areas of Microwave and RF characterisation, and Hyper-Terahertz Physics.

The University is committed to equality and diversity. Research staff at the ATI are supported and encouraged in their career development through mentoring and early career researcher training. We foster a collegial and collaborative atmosphere, in which individuals are valued for the varied skills and perspectives they bring.

For further information, contact Dr Radu Sporea at r.a.sporea@surrey.ac.uk

Main Responsibilities/Activities

Main responsibilities include:

- Development, documentation, testing and deployment of microcontroller / embedded system -based presence/pressure/fall detection systems for assisted living enabled by smart environments.
- Publication of research results in top journals and presentations at top conferences
- Dissemination of the above to the wider public
- Assistance with writing new proposals, IP protection documents, etc., where appropriate
- Identification of opportunities of collaborating within the institution and with external partners.

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Person Specification

The ideal candidate will be able to demonstrate the majority of the following:

- A PhD in Electronics, Computer Science, AI systems, Sensors and Control / Cybernetics, Physics, Semiconductors, Chemistry, or Material Science
- Experience in delivering embedded systems and sensor systems projects with a focus on design and deployment
- A proven track record of delivering high quality research and academic writing in a timely manner, or conversely, experience of delivering engineering design projects to a good standard.
- A publication or design record commensurate with the experience in the field
- Ability to work independently
- Ability to work together and integrate with a diverse research team
- Ability to interact with project partners, both industrial and academic
- Communication, presentation and writing skills applicable to academic, industrial and lay person interaction

Useful supplementary skills would include:

- Extensive experience of embedded systems and sensor systems
- Data visualisation
- Additive manufacturing experience
- Graphical presentation skills

Relationships and Contacts

Reporting to Dr Radu Sporea.
Please contact Dr Sporea for all enquiries: r.a.sporea@surrey.ac.uk