



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Autonomous Systems for Mobile Robotics

Faculty of Engineering & Physical Sciences



Salary: Grade 7 (£33,797 – £40,322 p.a.)

Reference: EPSEE1006

Closing date: 24 November 2019

Fixed-term until January 2021

We will consider flexible working arrangements

Research Fellow in Autonomous Systems for Mobile Robotics

School of Electronic and Electrical Engineering

Are you an enthusiastic and experienced researcher in applied mobile robotic systems? Are you looking for a new and exciting challenge as part of a world class robotics team? Do you want to design and create robotic systems that will change our lives?

As part of the £4.2M project "[Balancing the impact of City Infrastructure Engineering on Natural systems using Robots](#)" led by [Professor Phil Purnell](#), you will support the development of new robot designs and technologies in three areas: "[Perch and Repair](#)", "[Perceive and Patch](#)" and "[Fire and Forget](#)" using world class robot [fabrication facilities](#).

In this role you will take a leadership role in the design and implementation of Autonomous Systems for advanced robotic systems for practical demonstrators. As well as supporting project partners with hardware design, you will conduct pioneering work on innovative electronic systems integration for robotics, autonomous control strategies, communications, and sensing. Holding both a PhD (or shortly to be awarded), and a Bachelors or Masters degree in Electrical Engineering, Mechanical Engineering, Mechatronics and Robotics, or a related discipline, you will have experience in the design construction and test of advanced Autonomous systems including electronic subsystems using industry-standard software and test equipment.

What does the role entail?

As a Research Fellow your main duties will include:

- Use initiative, creativity and judgement in applying appropriate approaches to the research project, including the application of autonomous control; the design, construction and test of electronic circuits and subsystems for communications, sensing and actuation;
- Provide significant intellectual input into the development of the research objectives of the collaborative project, preparing papers for publication in leading international journals, and present findings at consortium meetings, international conferences and workshops;



- Work with the project collaborators and the National Facility for Innovative Robotic Systems to realise sophisticated practical demonstrators and field trials of robotics;
- Ensure good day-to-day progress towards project deliverables, ensuring that project objectives are met and that technical reports are completed on time to the satisfaction of the principal investigator, project leader and sponsor;
- Maintain good records and laboratory notebooks and back up research data according to University and sponsor requirements;
- Contribute to joint discussions with the wider research group, including collaborators in UCL, Birmingham and Southampton, making contacts for future collaboration where appropriate;
- Maintaining your own continuing professional development and mentoring less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

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

What will you bring to the role?

As a Research Fellow you will have:

- A PhD (or an expectation that a PhD will be awarded soon) and Bachelors or Masters in Electronic and Electrical Engineering, Mechatronics and Robotics, Mechanical Engineering or a related discipline;
- Experience in the design construction and test of advanced Autonomous systems including electronic subsystems using industry-standard software and test equipment;
- Ability to use basic embedded systems software and hardware platforms;
- Experience with robotics and related manufacturing techniques, such as 3D printing;
- High level of interpersonal and communication skills, including written and presentational, and the ability to work as a member of a team;
- An enthusiastic approach to research in robotics and autonomous systems;



- Demonstrated ability to work independently, showing initiative and creativity;
- A track record of publishing research results in high impact factor conferences and journals;
- Good time management skills, with the proven ability to meet deadlines;

You may also have:

- Experience in the design and fabrication of integrated mechatronic and robotic systems using rapid prototyping;
- Ability to use advanced embedded systems software and hardware platforms such as microcontrollers and FPGAs;
- Experience of ROS operating system;
- Experience with the operation of unmanned aerial vehicles (UAVs) and familiarity with the regulatory framework;
- Proven experience of the ability to interact with PhD students, Masters students and undergraduates in ways that will enhance the student experience in the School;
- Ability to contribute to and develop interdisciplinary collaborative research projects in a broad range of robotics application areas, for example as evidenced by prior experience of working on interdisciplinary projects.

How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Professor Ian Robertson, School of Chemical and Process Engineering

Tel: +44 (0) 113 343 7076

Email: i.d.robertson@leeds.ac.uk



Additional information

Faculty and School Information

Further information is available on the research and teaching activities of the School of [School of Electronic and Electrical Engineering](#).

A diverse workforce

The Schools in the Faculty of Engineering & Physical Sciences are proud to have been awarded the Athena SWAN [Bronze](#) or [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.

Working at Leeds

Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our [Working at Leeds](#) information page.

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

