



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Robotics and Drones,
Faculty of Engineering and Physical Sciences



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

Reference: EPSME1006

Closing date: 27 October 2019

Fixed-term, available until 3 Jan 2021

We will consider flexible working arrangements

Research Fellow in Robotics and Drones

School of Mechanical Engineering

Are you an enthusiastic and experienced researcher in applied 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](#)", 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 Robots and Drones for advanced robotic systems for practical demonstrators. As well as supporting project partners with hardware design, you will conduct pioneering work on innovative systems integration for robotics, and autonomous control strategies. 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 testing of advanced hardware platforms for robotics ideally including aerial platforms.

What does the role entail?

As a Research Fellow your main duties will include:

- Using initiative, creativity and judgement in applying appropriate approaches to the research project, including the application of aerial platforms for robotic applications such as grasping and manipulating objects;
- Providing 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;
- Working 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.

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 Robotics, Electronic and Electrical Engineering, Mechatronics, and Mechanical Engineering or a related discipline;
- Experience in the design construction and testing of advanced hardware platforms for robotics;
- Ability to use basic embedded systems software and hardware platforms;
- 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 or journals;
- Good time management skills, with the proven ability to meet deadlines.

You may also have:

- Experience with the operation of unmanned aerial vehicles (UAVs) and familiarity with the regulatory framework;
- Experience of ROS operating system;
- Experience in the design construction and testing of aerial platforms;



- Ability to use advanced embedded systems software and hardware platforms such as microcontrollers and FPGAs;
- Experience of processing computer vision for autonomous applications;
- 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 Robert Richardson](#), School of Mechanical Engineering, University of Leeds

Tel: +44 (0)113 343 2156

Email: R.C.Richardson@leeds.ac.uk

[Dr Stephen Prior](#), Faculty of Engineering and Physical Sciences, University of Southampton

Tel: +44 (0)23 8059 8366

Email S.D.Prior@soton.ac.uk

Additional information

Faculty and School Information

Further information is available on the research and teaching activities of the [School of Mechanical 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's 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.

