Northumbria University
NEWCASTLE

Appointment of

Faculty Positions in Robotics and Autonomous Systems

February 2024

Perrett Laver

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Contents

Welcome from Professor John Woodward

This is an exciting opportunity to play a role in the strategic development of research and teaching in Artificial Intelligence at Northumbria University within the Faculty of Engineering and Environment, collaborating with colleagues and contributing to the development of a robotics research team.

Thank you for your interest in this opportunity. In late 2023, two awards totalling £25 million from the UK Space Agency and Lockheed Martin Space, one of the largest global research and development companies in the space and satellite technology sector, were match-funded by the University, enabling Northumbria to begin construction of the new £50 million North East Space Skills and Technology Centre (NESST). Northumbria has also recently been named as one of 12 Centres for Doctoral Training in Artificial Intelligence as part of a major £117 million funding announcement by UK Research and Innovation (UKRI).

The Centre, which will focus on citizen-centred approaches to AI, will welcome its first cohort of PhD candidates in September 2024.

As we aim to expand our capacity in AI, I am seeking highly motivated individuals at all levels with expertise in Robotics research, with a particular interest in physical robotics systems. We particularly welcome leaders in Robotics who are willing to bring their research teams and join us in this exciting time at Northumbria, and to contribute to development and innovation across AI.

Professor John Woodward
Pro Vice-Chancellor for the Faculty of Engineering and Environment

Executive Summary

Northumbria is a research-intensive, modern university with a global reputation for academic excellence.

It was named UK University of the Year 2022 in the Times Higher Education Awards. The University has its origins in Rutherford College, founded in 1880. Today, by putting students at the heart of an outstanding experience, and with world leading research and award-winning partnerships, Northumbria is transforming to take on tomorrow. Northumbria is ranked in the top 25 in the UK for research power, according to the results of the latest Research Excellence Framework. The University is also ranked top 30 in the UK for the number of graduates entering professional employment, with nine out of ten graduates working or studying six months after graduation.

Our recent successes will enable Northumbria University to build a research group in robotics to expand and diversify our capabilities in the AI subject area through the establishment of a new research cluster in robotics and physical autonomous systems.

We are seeking to recruit a Professor, Associate Professor or Assistant Professors in Robotics and Autonomous Systems to contribute to the leadership of this subject area of research at Northumbria. We encourage applications from any field of this discipline but particularly welcome applications from researchers with expertise and interests in Robotics for Extreme Environments, particularly Space, Human Robot Interaction, Bioinspired Robots, UAVs and drones, and General Robotics Cognition and AI.

You will be part of a growing Computer and Information Sciences department and a lively academic community of researchers based in an award-winning, purpose-built building at the heart of our campus in the centre of Newcastle upon Tyne. You will contribute to educational activities in the Department and Faculty including undertaking individual and joint research to produce high-quality academic outputs; designing, developing and delivering high-quality teaching activities; and participating in external activity to generate income and promote the subject area. We value applicants that display good academic citizenship including mentoring and supporting colleagues, promoting good practice across all aspects of academic life.

Our Journey

Northumbria is a research-intensive university that unlocks potential for all, changing lives regionally, nationally and internationally.

A bold, confident and ambitious university, it is an institution that embraces the future and faces challenges head on.

We create new knowledge that benefits society and offer research-rich education that transforms students' lives. Achieving strength in education and research, and making the connection between them, gives Northumbria a transformational role: for place, society, culture and the economy, in the UK and globally.

Northumbria can trace its origins back to Rutherford College in late 19th century Newcastle and more than 130 years on, Northumbria is empowering a new generation of innovators, visionaries and change-makers to transform lives, to make a remarkable impact on the world, and to take on tomorrow.

Quality research is embedded at the centre of everything that the University does, alongside a clear social mobility mission, and alignment to business and the demands of the regional and local economy.

Northumbria is one of the largest universities in the UK, with 37,000 students from 146 countries and over 3,000 staff. In recent years, the University has grown its cohorts of masters, doctoral, international and degree apprenticeship students.

The University is based in two of the best student cities in the UK, Newcastle and London, with our London Campus being one of the largest satellite campuses in the capital. Northumbria has a rapidly expanding global presence, with partnerships and collaborative ventures in Singapore, Indonesia, China, Qatar, the Caribbean and beyond.

Northumbria in League Tables

Northumbria University recorded the biggest rise in research power of any UK university for the second time in the 2021 Research Excellence Framework. The University is now ranked 23rd in the UK for research power in the the REF2021 rankings, with 80% of our research rated as internationally excellent or world leading.

Ranked in the top 40 in the UK in both The Guardian and Complete University Guides, Northumbria now has the 28th highest entry points in England according to The Times Good University Guide 2024 and is ranked 14th in England for 'value added' by The Guardian. This metric analyses the degree classification students achieve based on their entry qualifications, meaning students are achieving strong degree outcomes.

Northumbria was named both Research University of the Year and Modern University of the Year in the inaugural Daily Mail University Guide and we are ranked in the top 20 in the UK for sustainability in the most recent People and Planet University League.

Faculty of Engineering and Environment

The Faculty of Engineering and Environment is a diverse Faculty comprising over 340 academics, 100 support staff and researchers, 250 PhD students and over 5,000 taught students. Our departments cover:

- Architecture and Built Environment;
- Computer and Information Sciences;
- Geography and Environmental Sciences;
- Mechanical and Construction Engineering;
- Mathematics, Physics and Electrical Engineering.

The Faculty has recently grown research across the portfolio with focused excellence in:

- Cold and Palaeo Environments, (including ice/ocean modelling), with a NERC Doctoral Training Partnership, One Planet, in collaboration with Newcastle University;
- Renewable Energies with an EPSRC Centre for Doctoral Training, ReNu, with Newcastle and Durham Universities;
- Solar and Space Physics;
- Human Computer Interaction (HCI);
- and Smart Surfaces and Materials.

The Faculty is based around our recently developed STEM laboratories, funded through a HEFCE infrastructure grant, our state-of-the-art Computer Science Building and the recently developed Architecture studios in our historic Sutherland Building.

Department of Computer and Information Sciences

The Department of Computer and Information Sciences is dedicated to preparing our students for success, combining high-quality teaching with world-leading research.

Creative teaching and world-class research are conducted in our award-winning, state-of-the-art £7 million building. Located in the heart of Northumbria's campus in the centre of the vibrant city of Newcastle, our department is a bustling hub of innovation and talent.

The Computer and Information Sciences degree programmes we offer benefit from strong relationships with partners in business and industry, and our graduates are well-prepared for work or further study. Our research targets some of the biggest challenges we currently face, including global health and well-being, sustainability, safety and security, and digital living and learning.

In the recent Research Excellence Framework (REF2021), we were ranked 12th in the UK (out of a total of 90 departments) for research power (a measure of both quality and volume), marking a rise of 54 places. We are one of only 19 universities to be recognised as an Academic Centre of Excellence in Cyber Security Research. Our undergraduate degree programmes are accredited by the British Computer Society, the Chartered Institute for IT, for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional. As essential partners in the £40 million Institute of Coding, government-funded to address the UK's digital skills shortage, Northumrbia is at the forefront of driving change in the field.

About the University

Doctoral Training in Artificial Intelligence

Northumbria University has been named as one of 12 Centres for Doctoral Training in Artificial Intelligence as part of a major £117 million funding announcement by UK Research and Innovation (UKRI).

The centres, based at 16 universities, will train the next generation of AI researchers and innovators, benefitting the UK's economy and society. Doctoral students will specialise in areas such as AI for robotics, digital healthcare, decision making and sustainability.

The UKRI funding includes £9.5 million for Northumbria, making it one of the largest single awards the University has ever received.

The Centre at Northumbria will be known as the UKRI AI Centre for Doctoral Training in Citizen-Centred Artificial Intelligence, and will recruit its first cohort of students to start in September 2024. It will involve academics from across the University and will focus on the inclusion of citizens in the design and evaluation of AI – helping to ensure the rapidly advancing technology works for everyone.

North East Space Skills and Technology Centre

Our North East Space Skills and Technology Centre (NESST) is a state of the art £50 million facility funded in partnership by Northumbria, the UK Space Agency and global aerospace giant Lockheed Martin. NESST will house world-leading space experts and unite industry with academia on innovative research, technological developments and in-demand skills provision, to transform the UK space economy.

Research is at the heart of Northumbria's commitment to transform the next generation of space innovation. In the latest Research Excellence Framework (REF2021) Northumbria University achieved the biggest rise in research power ranking of any UK university and this is reflected through the strength of our Interdisciplinary Research Theme on Space as well as our specialist areas including Satellite Communications Engineering, Solar and Space Physics, Space Law Policy and Space Physiology.

Through NESST, Northumbria will take forward its world-leading research in projects including the development of a new laser-based satellite communications system.

A recent £5 million award from the UK Space Agency is enabling Northumbria to move forward with its prototype work on this technology, which has the potential to transform the satellite communications industry. The goal is to develop the world's first commercially available system that allows satellites to communicate with each other via lasers rather than radio frequencies, with an academic and industry consortium currently working together to design, test and build the first CubeSat with laser optical communications technology. It is expected to launch in 2025.

Appointments in Robotics

We are seeking to appoint Faculty across all levels to join the Department of Computer and Information Sciences, to expand and diversify our capabilities in the AI subject area through the establishment of a new research cluster in robotics and physical autonomous systems. This will work with colleagues in relevant fields and drive forward our ambition in space technologies. The post holder is expected to capitalise on the major opportunities available in this area – for instance, the current announcement of Northumbria's ambition to have the UK's first university-led multi-satellite space mission and its journey to create the next generation of AI innovators.

The ideal candidate can bring significant experience in Robotics to the University's space strategy and the Department's ambition through the delivery of high-quality research. The ideal candidate is an established academic with track record in lead a research group with laboratory, attracting large scale research grant with a track record in publishing in high-quality journals. Professors who are open to relocating their whole team are strongly encouraged to apply.

For more information about the appointment of Faculty Postions, including person specifications, please click **here**.

How to Apply

An executive search firm Perret Laver has been appointed to manage the recruitment process. Perrett Laver will support the University in helping to identify the widest possible field of qualified candidates and assisting in the assessment of candidates against the requirements for the role.

If you wish to discuss any of the roles in Robotics and Autonomous Systems in more detail please contact Annabel Holt on **annabel.holt@perrettlaver.com** or on +44 (0)20 7340 6219.

Applications should consist of a full CV detailing academic and professional qualifications, full employment history, and relevant achievements and should be accompanied by a covering letter describing briefly their suitability for this role, why the appointment is of interest, and what they believe they can bring to the role. These can be uploaded **here**.

The closing date for receipt of applications is **Monday 11th March 2024 at 9:00am GMT**. It is anticipated that interviews will take place in late April.

Northumbria University is a great place to work. We empower our exceptional people to achieve shared ambitions and promote a sustainable work life balance.

We are an on-campus organisation where colleagues work regular patterns of hours and on campus, with some flexibility on the timing of their hours and the location of their work in discussion with their manager. We offer a wide range of benefits including excellent pension schemes, flexible working, a generous holiday entitlement, continued commitment to your learning and development, and more.

Northumbria University is committed to creating an inclusive culture where we take pride in, and value, the diversity of our staff. We encourage and welcome applications from all members of the community. The University holds a bronze Athena Swan award in recognition of our commitment to advancing gender equality, we are a Disability Confident Employer, a member of the Race Equality Charter and are participating in the Stonewall Diversity Champion Programme. We are also a member of the Euraxess network, which delivers information and support to professional researchers. The University has implemented a range of flexible working arrangements, and we are happy to explore candidate requirements as part of the recruitment process.

We welcome applications from the UK and across the world. Visit our web pages for details about **Relocation Assistance**.

Accessibility Statement

Should you require access to these documents in alternative formats, please contact Sarah Snelling at ***sarah.snelling@perrettlaver.com****.*

If you have comments that would support us to improve access to documentation, or our application processes more generally, please do not hesitate to contact us at ***accessibility@perrettlaver.com****.*

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Perrett Laver

AMERICAS ASIA PACIFIC EMEA

One Embassy Gardens,
8 Viaduct Gardens,
London, SW11 7BW, UK.

+44 (0) 20 7340 6200