University of Nottingham
UK | CHINA | MALAYSIA

Job title	Research Fellow	Job family and level	Research and Teaching Level 4
School/ Department	Horizon Digital Economy Institute, Computer Science	Location	Jubilee Campus

Purpose of role

We seek a talented researcher with a background in Collaborative Robotics (Co-bots) to develop and/or research interactive robotic and autonomous systems. This is an exciting opportunity to work in a multidisciplinary national research Hub on Trustworthy Autonomous Systems, funded by UKRI until 2024 (www.tas.ac.uk), working with experts in Computer Science, Engineering, Policy, Medicine & Health, Sociology and Psychology (https://www.nottingham.ac.uk/news/nottingham-experts-join-drive-to-develop-trustworthy-autonomous-systems). You will work alongside interdisciplinary researchers in Horizon DER (www.horizon.ac.uk) and the Mixed Reality Lab in the School of Computer Science at UoN.

We look to appoint a candidate with a background in the technical development of robotic systems, and an interest in Human-Robot Interaction. You would contribute or lead research projects that build and study collaborative robotic systems that are trustworthy in principle and trusted in practice in areas such as health and wellbeing, the future of work, recovery from the pandemic, pathways to net zero, and an inclusive, fair and just world.

You will have experience in the design, development, and evaluation of novel collaborative robotic systems. Prior experience should include strong software development skills (with an emphasis on Python and/or C/C++) and the use of Robot Operating System (ROS) middleware, Git and Linux. Furthermore, a demonstrable background in relevant robotic development utilising skills such as networking, computer vision, sensors, embedded systems, additive manufacturing, and other hardware (Raspberry PI, Arduino, microcontrollers) would be desirable. Exposure to docker, database development and web development would be advantageous. Furthermore, experience in Human-Robot Interaction, human-centred design, or user studies would set you apart.

You will work with colleagues and robotic equipment in the university's Cobot Maker Space (https://cobotmakerspace.org), which includes a range of anthropomorphic, mobile, telepresence, and gripper arm robots.

You will be expected to undertake independent research as well as working as part of a team - this will include using approaches or methodologies and techniques appropriate to the type of research and being responsible for writing up your work in order to contribute to published outcomes. You will have the opportunity to use your initiative and creativity to identify areas for research, develop research methods and extend your research portfolio.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	To plan and conduct design, development, and evaluation using recognised approaches, methodologies and techniques within the research area.	50%

2	To analyse and illuminate data, interpret reports, evaluate and criticise texts and bring new insights to research area.	10%
3	To contribute to writing up research findings for publication.	15%
4	To assist with the preparations, proposals and applications to both external and/or internal bodies for funding, contractual or accreditation purposes.	5%
5	Public and community awareness to bring our research to a wide audience.	5%
6	To co-ordinate the operational aspects required for the TAS hub	5%
7	To assist in supervision of postgraduate and undergraduate students.	5%
8	To plan and manage own research/development activity and resolve problems, if required, in meeting own/team research objectives and deadlines in collaboration with others.	5%

Person specification

	Essential	Desirable
Skills	- Technical development skills applicable to collaborative robotic systems - Strong software development skills (with an emphasis on Python and/or C/C++) and the use of Robot Operating System (ROS) middleware, Git and Linux - Excellent oral and written communication skills, including the ability to communicate with clarity on complex information. - Developing technical development skills, with the ability to creatively apply relevant research approaches, models, techniques and methods - Analytical ability to facilitate conceptual thinking, innovation and creativity. - Ability to build relationships and collaborate with others, internally and externally.	- Relevant robotic development skills such as networking, computer vision, sensors, embedded systems, additive manufacturing, and other hardware (Raspberry PI, Arduino, microcontrollers) - Exposure to docker, database development and web development - Evaluative methods, e.g., user studies, surveys, interviews, focus groups - Ability to assess and organise resource requirements and deploy effectively. - Ability to foster a research culture and commitment to learn in others. - High analytical ability to analyse and illuminate data, interprets reports, evaluate and criticise texts and bring new insights.
Knowledge and experience	- Design, development, and evaluation of novel collaborative robotic systems - Evidence of sufficient breadth or depth of development methodologies and techniques to work in research area. - Some practical experience of applying the specialist skills approaches and techniques required for the role.	- Experience in Human-Robot Interaction, human-centred design, or user studies - Demonstrable interest in autonomous systems - Interest or experience in TAS topics (health and wellbeing, the future of work, recovery from the pandemic, pathways to net zero, and an inclusive, fair and just world.) - Experience of working within diverse teams.
Qualifications, certification and training (relevant to role)	- PhD or substantial practical software development experience - Degree (or equivalent) in relevant subject area	Master's Degree, or equivalent in relevant subject area.

The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people   Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.

Taking ownership   Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.

Forward thinking   Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.

Professional pride   Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.

Always inclusive   Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others

Line manager   Associate Professor

Role holder   Research Fellow

Key stakeholder relationships   Researchers   Operations Team   Partners