UNIVERSITY OF LINCOLN
JOB DESCRIPTION

JOB TITLE	Research Fellows for Robot Manipulation, Teleoperation and Machine Learning				
DEPARTMENT	School of Computer Science				
LOCATION	Brayford				
JOB NUMBER	COS631	**GRADE**	7	**DATE**	Mar 2019
REPORTS TO	Principal Investigator				

CONTEXT

We are looking to recruit two Postdoctoral Research Fellows with research profiles in robotics, robot learning, tele-operation and shared control, robot perception, robot grasping, robot motion planning to join our growing robotics research team.

The successful candidates will work within the CHIST-ERA funded HEAP project (and related projects), which is a European consortium that investigates robotic sorting of unstructured heaps of unknown objects. The consortium consists of the University of Lincoln (leading), TU Wien (Markus Vincze), IDIAP in Switzerland (Jean-Marc Odobez), INRIA Nancy (Serena Ivaldi) and IIT in Italy (Lorenzo Natale). Our team will investigate novel robot manipulation and machine learning algorithms that can learn from human guidance and shared control. Robotic heap sorting is of interest for many applications, such as nuclear decommissioning, recycling and manufacturing. The work will also be highly aligned with the National Centre for Nuclear Robotics (NCNR) where Lincoln is a core partner. In addition, there is an opportunity to work in a related EU project on robot perception and manipulation of objects for pharmaceutical warehouse applications. We offer excellent opportunities to develop a strong individual research portfolio while being engaged in impactful and exciting research solving real-world problems of great societal need. Moreover, you will have access to state-of-the-art research robot equipment consisting of cutting-edge robot arms.

You will be placed at the centre of this exciting project, collaborating closely with other researchers and universities, taking a leading role in the research, development, integration and orchestration of the overall system, with a focus on algorithm development and software development.

JOB PURPOSE

The Research Fellow is responsible for conducting research on the project, as directed by the Principal Investigator, and is expected to operate with a significant degree of autonomy.

The post holder may be required to help supervise the work of more junior researchers and can be involved in supervision of PhD and MSc students.

KEY RESPONSIBILITIES

Literature Surveys
Undertake literature surveys and other investigations of the state-of-the-art, and prepare reports as required.
Programme of Research
Design and undertake programme of research under the direction of the Principal Investigator, demonstrating a significant level of autonomy. Lead in the production of high-quality research outputs, including reports, papers and other publications of national/international standing.
Project Management
Perform project management activities, planning, scheduling, monitoring and reporting on progress of research projects.
Liaison and Networking
Identify and liaise with internal and external collaborators, and with colleagues in the Department, maintaining positive and effective working relationships.
Internal Research Activities
Participate in and help to organise internal research activities, including seminars, research meetings and conferences.
Continuous Professional Development
Undertake continuous professional development activities.
Grant Applications
Contribute to the production of grant applications.
Teaching Support
Aid in the supervision of postgraduate research students.

In addition to the above, undertake such duties as may reasonably be requested and that are commensurate with the nature and grade of the post.

ADDITIONAL INFORMATION

Scope and dimensions of the role
We are looking to recruit postdoctoral researchers with relevant experience and/or a keen interest in a number of research areas, including (but not limited to): - Robot Grasping and Manipulation - Teleoperation and Shared Control - Robot Vision and Perception - Learning from Demonstrations - Reinforcement Learning - Learning from Human Feedback The post holder will be placed at the centre of this exciting project, collaborating closely with other researchers and universities, taking a leading role in the research, development, integration and orchestration of the overall system, with a focus on algorithm development and software development. Applicants should have or expect to soon obtain, a PhD in a relevant area. You must have excellent mathematical and coding skills (C++/Python, ROS). This opportunity allows you to engage in international collaboration within an ambitious team, to work with state-of-the-art robotic hardware and software, and to benefit from excellent support to produce and disseminate original research contributions in the leading international conferences and journals.

Key working relationships/networks	
Internal	**External**
• Principal Investigator • Head of Research Centre • Head of School • Other research and academic staff within the school	• Research collaborators • Sponsors and clients

UNIVERSITY OF LINCOLN
PERSON SPECIFICATION

JOB TITLE	Research Fellows for Robot Manipulation, Teleoperation and Machine Learning	**JOB NUMBER**	COS631

Selection Criteria	**Essential (E) or Desirable (D)**	**Where Evidenced Application (A) Interview (I) Presentation (P) References (R)**
Qualifications:		
PhD or equivalent (good candidates may be accepted with a PhD pending, subject to publication record)	**E**	**A**
Experience:		
Extensive experience of relevant research methods	**D**	**A/I**
Authorship of research outputs of national/international standing	**E**	**A/I**
Experience of research in specific project area	**E**	**A/I**
Teaching support	**D**	**A/I**
Skills and Knowledge:		
Extensive knowledge specific to one or more project-relevant research area	**E**	**A/I**
Ability to design, conduct and project manage original research in the subject area	**E**	**A/I**
Excellent written communication, including the ability to write reports and research outputs	**E**	**A/I**
Ability to prioritise own workload and work to specified deadlines under pressure	**E**	**A/I**
Ability to communicate complex subjects orally	**E**	**A/I**
Skills specific to project/area	**E**	**A/I**
Relevant Software development skills (such as C++, ROS and Python)	**E**	**A/I**
Supervising Research Students	**D**	**A/I**
Competencies and Personal Attributes:		
Flexible approach to workload	**E**	**I**
Ability to work on own and as part of a team	**E**	**I**
Enthusiasm and commitment	**E**	**I**

Essential Requirements are those, without which, a candidate would not be able to do the job. **Desirable Requirements** are those which would be useful for the post holder to possess and will be considered when more than one applicant meets the essential requirements.

Author	GN	**HRBP**	SP