

UNIVERSITY OF LINCOLN JOB DESCRIPTION

JOB TITLE	Post Doctoral Research Associate in IoT Wireless Sensor Network				
DEPARTMENT	School of Engineering				
LOCATION	Lincoln				
JOB NUMBER	COS752	GRADE	7	DATE	June 2020
REPORTS TO	Principal Investigator				

CONTEXT

This exciting opportunity has become available for a PhD/Masters level candidate to design and develop a low-power smart sensor system for cold storage food warehouses. The candidate will have the opportunity to undertake internationally leading research in the field of low-power design and wireless communications hardware. You will simulate, design, assemble and test wireless sensor networks (WSNs) and perform data analysis using machine-learning algorithms.

JOB PURPOSE

The Post Doctoral Research Associate is responsible for undertaking research on the project, as directed by the Principal Investigator and Co-Investigators. It is expected a significant degree of autonomy by working both independently and as part of a larger team of researchers to find solutions to meet the project aims, and to support national and international collaborations within the project.

The post holder may be required to provide embedded systems design support for other research in the School, in robotics, wireless communications and high frequency sensing systems.

Participate in multi-disciplinary team meetings as appropriate and directed by research supervisors and deliver reports and presentations as required by relevant project funding agencies and companies.

KEY RESPONSIBILITIES

Literature Surveys
Undertake literature surveys and other investigations of the state-of-the-art, and prepare reports as required.
Programme of Research
<p>To help in the design and implementation of practical WSN demonstrators and embed Machine Learning techniques to perform data analysis.</p> <p>To perform specified research under the direction and with advice from the Co-Investigators, to generate original knowledge, and to prepare reports on results, as required.</p> <p>Plan own day-to-day research activity within the context of the required research programme, exhibiting a high degree of autonomy.</p> <p>Contribute to the production of research outputs, including software, reports, papers and other publications, and preparation for and presentation at international research conferences.</p>
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
<p>Engage in teaching support activities, up to a maximum of six hours per week, possibly including leading a small number of units (no more than two per annum).</p> <p>Aid in the supervision of postgraduate research students.</p>

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

Key working relationships/networks	
Internal	External
<ul style="list-style-type: none"> Principal Investigator Head of Research Centre Head of School Other research and academic staff within the school 	<ul style="list-style-type: none"> Research collaborators Sponsors and clients

UNIVERSITY OF LINCOLN PERSON SPECIFICATION

JOB TITLE	Post Doctoral Research Associate	JOB NUMBER	COS752
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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) in the area of Electrical/Electronics, Computer Science and Engineering, Robotics, Embedded Systems, Mechatronics or related fields	E	A
Extensive hands-on knowledge specific to project/area.	E	A/I
Experience:		
Extensive experience of relevant research methods	D	A/I
Practical and experimental experience of Electronics related projects in sensor networks, Arduino/Raspberry Pi or similar technologies.	E	A/I
Experience in Wireless Sensor Networks/ Mesh Networks	D	A/I
Able to demonstrate practical and experimental experience of programming in C/C++ or embedded platforms/related design tools.	E	A/I
Experience of working with industrial partners	D	A/I
Authorship of research outputs of national/international standing	D	A/I
Experience on PCB design and 3D modelling using appropriate tools.	E	A/I
Teaching support	D	A/I
Skills and Knowledge:		
Knowledge specific to project/area	E	A/I
Ability to interpret and clearly articulate technical information and to present to a wide ranging audience including senior stakeholders.	E	A/I
You will have an aptitude for research and publishing papers in conferences and journals.	D	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

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
Be proactive, able to influence others and build rapport quickly, developing long term relationships.	E	I
You will enjoy responsibility, solving unexpected problems and challenging the status quo.	E	I
Business Requirements:		
Willingness to travel national.	E	A/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	EN	HRBA	
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