KTP Associate: Data Analytics and Machine Learning for Internet of Things (IoT)

Department	Design, Manufacture and Engineering Management (www.strath.ac.uk/engineering/designmanufactureengineeringmanagement/), in association with Bosch Rexroth Limited (www.bosch.co.uk)
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)

Staff Category	KTP	Reference No	276229
Reports To	Jorn Mehnen (Academic Supervisor), Iain Edward (Company Supervisor)	Grade:	RS79
Salary Range:	Starting salary £32,000 p.a. (Competitive performance based salary review) plus £5,167 training & development budget	Contract Type:	Fixed Term (31 months)
FTE	1	Closing Date	08/09/2020

Job Advert

The Department of Design, Manufacture and Engineering Management in partnership with Bosch Rexroth Limited (www.bosch.co.uk) are seeking to appoint a Knowledge Transfer Partnership (KTP) Associate in the area of Digital Manufacturing, with a focus on Signal processing, Data Analytics and the Industrial Internet of Things.

Bosch Rexroth Ltd, a UK registered wholly owned subsidiary of Bosch, provides economical, precise, safe and energy efficient technologies for driving, controlling and moving. The Bosch Rexroth plant at Glenrothes is the only Bosch plant that makes Radial Piston Motors for hydraulic applications, which are supplied worldwide. The site employs 400 staff and is responsible for product design, development, manufacture, assembly, testing and servicing.

The position offers the Associate the following benefits:

*   a challenging and rewarding job with responsibility
*   competitive performance-based salary review
*   a planned programme of training courses, including a £5,167 personal development budget
*   mentoring from experienced industrial and academic supervisors
*   the support and resources of the University of Strathclyde
*   the possibility of registering for a higher degree with the University
*   the potential for good career development with the company at the end of the scheme
*   developing and proving expertise in the prospering fields of Data Analytics, Internet of Things and Digital Manufacturing
*   the opportunity to make important and tangible improvements in a large and dynamic company with a world-renowned brand name.

The post will be predominantly based at the company premises in Glenrothes (near Edinburgh) with potential visits to end users of the Radial Piston Motors worldwide and Strathclyde University Campus.

The project is part of the Knowledge Transfer Partnership (KTP) programme that aims to help businesses improve their competitiveness and productivity through better use of knowledge, technology and skills that reside within the UK knowledge base. Successful Knowledge Transfer Partnership projects are funded by UK Research and Innovation through Innovate UK and are part of the government's Industrial Strategy. To find out how KTP works and the vital role you will play if you successfully secure a KTP Associate position please visit: www.ktpws.org.uk

To be considered for the role you will be educated to a minimum of Degree level in Computer Engineering or Manufacturing Engineering with computing experience. You will be skilled in the application of data analytics in product/process/service

performance, have experience in the design and development of cloud-based/fog-based systems, experience of design and development of smart products/processes/services, experience of sensor application and Industrial IoT technology and experience in Digital Manufacturing, and some experience of working in industry. You will be self-directed and self-motivated, with the ability to project manage with guidance, as required, and you will have excellent communication skills with the ability to interact with a range of stakeholders and excellent negotiation skills with the ability to engage others.

Whilst not essential for the role, applications are welcomed from candidates with a Masters in a relevant discipline, and industry experience in IoT, smart technology or condition monitoring.

Job Description

Brief Outline of Job:

Supported by the academic team at the University of Strathclyde, the KTP Associate will focus on the development and implementation of a fully functional IIoT solution for Bosch Rexroth Ltd in Glenrothes. The development will be able to build upon and extend the technological ecosystems of Bosch. The Associate will need to manage the dynamic and evolving concepts of real-time signal collecting and processing and Industrial IIoT in harsh industrial environments. The Associate and the academic team will introduce the latest state-of-the-art technologies to staff across Bosch Rexroth. Stakeholder management will be key to the initial and long-term success – consulting with various business units from across Bosch, including the Bosch Rexroth's IoT team, Radial Piston Motor manufacture and condition monitoring unit, the Bosch Cloud analytics team, Bosch Rexroth IT, as well as marketing, customer relationship, and the information security teams. The OEM customers as well as the end user of the Radial Piston Motor will shape the development of the new system and processes. The Associate will also contribute to the knowledge base through training workshops and reports which will be the basis for journal publications and lecture material. Consistent reference to literature and use of academic and industry expertise will ensure best practice and successful delivery.

Main Activities/Responsibilities:

1.	Lead, design, develop and implement the IIoT solution for Radial Piston Motors
2.	Develop an IIoT solution that creates value in the Bosch Rexroth ecosystem, which is scalable, sustainable and integrated with existing operations.
3.	Develop a workshop and training programme to exchange knowledge with stakeholders and direct the product developments.
4.	Develop a Bosch Rexroth, OEM, MCR end user and academic stakeholder network for maintaining useful and efficient communication between all parties. This includes also writing regular reports for the stakeholders.
5.	Prepare conference and journal articles related to the KTP.
6.	Engage in continuous professional development within the University and Company as appropriate
7.	Completion of KTP Associate Final Report by the required deadline.

Person Specification

Educational and/or Professional Qualifications
(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1	BEng in Computer Engineering, or Manufacturing Engineering with Computing.
D1	MEng degree in Computer Engineering, or Manufacturing Engineering with Computing.

Experience

E2	Application of data analytics in product/process/service performance
E3	Design and development of cloud-based/fog-based solutions
E4	Experience in the application of Sensor and IIoT technology
D2	Design and development of smart product/process/service
D3	Experience of working in industry, specifically looking at IIoT, smart technology or condition monitoring

Job Related Skills and Achievements

E5	Cloud computing – experience in the use of Cloud services similar to e.g. Amazon Web Services (AWS)
E6	Signal processing with data analytics – for example Fast Fourier analysis and basic statistics

E7	Experience of algorithm development and software development for IIoT and the Cloud
E8	The ability to independently project management, with guidance as required
D4	The ability to contribute to journal papers
D5	Good customer relationship management
Personal Attributes	
E9	Self-directed and self-motivated
E10	Good attention to detail
E11	Excellent communicator, with the ability to engage with a range of stakeholders
E12	Strong interpersonal skills, including negotiating, influencing and network building
D6	Desire to lead
D7	Awareness of commercial drivers
D8	Proficient in technical writing/presentation

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before the interview without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (http://www.strath.ac.uk/hr/workforus).

Informal enquiries about the post can be directed to Professor Jorn Mehnen (jorn.mehnen@strath.ac.uk).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found here.

Conditions of Employment

Conditions of employment relating to the KTP staff category can be found at: Conditions of Employment.

Probation

Where applicable, the successful applicant will be required to serve a 6 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from Payroll and Pensions.

Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. Our Values have been derived from how we act and how we expect to be treated as part of Strathclyde.