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University of Strathclyde Glasgow

Research Associate of Smart Manufacturing

Department	Design, Manufacture and Engineering Management (www.strath.ac.uk/engineering/designmanufactureengineeringmanagement/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Research	Reference No	419778
Reports To	The Head of School/Department, through Xichun Luo	Grade:	7
Salary Range:	£33,309 - £35,326	Contract Type:	Fixed Term (24 months)
FTE:	1 (35 hours/week)	Closing Date	Sunday, 30 January 2022

Job Advert

A Research Associate is sought to join the Department of Design, Manufacture and Engineering Management to undertake research in smart manufacturing within an EPSRC Future Manufacturing Systems project "A Multiscale Digital Twin-Driven Smart Manufacturing System for High Value-Added Products (EP/T024844/1)". The Research Associate will carry out research and development of smart process control algorithm and its implementation on a number of precision machines. The Research Associate will disseminate project information and knowledge through journal publications and conference presentations and contribute to lectures, tutorials and laboratories within the department, as appropriate.

As a Research Associate, under the general guidance of a research leader, you will develop research objectives and proposals, play a lead role in relation to a specific project/s or part of a broader project, conduct individual and/or collaborative research, contribute to the development of new research methods, identify sources of funding, and contribute to the securing of funds for research, including drafting grant proposals and planning for future proposals. You will write up research work for publication, individually or in collaboration with colleagues, and disseminate the results via peer reviewed journal publications and presentation at conferences. You will join external networks to share information and ideas, inform the development of research objectives and to identify potential sources of funding. You will collaborate with colleagues to ensure that research advances inform departmental teaching effort and you will collaborate with colleagues on the development of knowledge exchange activities by, for example, participating in initiatives which establish research links with industry and influence public policy and the professions. You will supervise student projects, provide advice to students and contribute to teaching as required by, for example, running tutorials and supervising practical work. You will contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees and engage in continuous professional development.

To be considered for the role, you will be educated to a minimum of PhD level in an appropriate discipline, or have significant relevant experience in addition to a relevant degree. You will have sufficient breadth or depth of knowledge in automation and control/mechatronics/precision instrument/precision manufacturing and a developing ability to conduct individual research work, to disseminate results and to prepare research proposals. You will have an ability to plan and organise your own workload effectively and an ability to work within a team environment. You will have excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

Whilst not essential for the role, applications are welcomed from candidates with: relevant work experience, membership of relevant Chartered/professional bodies (including the Higher Education Academy), experience of relevant student supervision and teaching activities, and/or experience of knowledge exchange related activities.

Job Description

Brief Outline of Job:

To undertake a specific research project/s under the general guidance of a research leader; to establish a personal research portfolio and plan research proposals, with assistance from senior colleagues as required; to engage where required in relevant teaching, professional and knowledge exchange activities; and input to administrative activities.

Main Activities/Responsibilities:

1.	As part of a wider research group or programme, develop research objectives and proposals for own or joint research and play a lead role in relation to a specific project/s or part of a broader project, with guidance from senior colleagues as required.
2.	Plan and manage own workload, with guidance from colleagues as required.
3.	Conduct individual and/or collaborative research, including determining appropriate research methods and contributing to the development of new research methods.
4.	Identify sources of funding and contribute to the securing of funds for research, including drafting grant proposals and planning for future proposals.
5.	Write up research work for publication, individually or in collaboration with colleagues, and disseminate results as appropriate to the discipline by, for example, peer reviewed journal publications and presentation at conferences.
6.	Join external networks to share information and ideas, inform the development of research objectives and to identify potential sources of funding.
7.	Collaborate with colleagues to ensure that research advances inform departmental teaching effort.
8.	Collaborate with colleagues on the development of knowledge exchange activities by, for example, participating in initiatives which establish research links with industry and influence public policy and the professions.
9.	Supervise student projects, provide advice to students and contribute to teaching as required by, for example, running tutorials and supervising practical work.
10.	Contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees.
11.	Engage in continuous professional development.

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	Good honours degree and PhD (or equivalent professional experience) in an appropriate discipline i.e. automation and control/ mechatronics/precision instrument/precision manufacturing.
D1	Membership of relevant Chartered/professional bodies (including Higher Education Academy).

Experience

E2	Sufficient breadth or depth of knowledge in the relevant discipline/s to contribute to research programmes and to the development of research activities.
E3	Hand-on work experience of industrial/PC-based controller and mechatronics (including metrology sensors) integration for precision machines.
E4	Experience of precision motion control and/or manufacturing process control.
D2	Experience of digital twin technology and its application in precision manufacturing.
E5	Track record of securing research funding and/or potential to lead successful research bids.
E6	A body of published research in highly-ranked journals in the relevant discipline.
D3	Experience of relevant student supervision and teaching activities.
D4	Experience of knowledge exchange related activities.

Job Related Skills and Achievements	
E7	Developing ability to conduct individual research work, to disseminate results and to prepare research proposals.
E8	Ability to plan and organise own workload effectively.
E9	Ability to work within a team environment.
Personal Attributes	
E10	Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted 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 Xichun Luo (xichun.luo@strath.ac.uk)

Conditions of Employment

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

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.

Probation

Where applicable, the successful applicant will be required to serve a 9 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.

Interviews

Formal interviews for this post will be held on a date to be confirmed.

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.