

# Senior Manufacturing Engineer

Department	Advanced Forming Research Centre, Department of Design, Manufacture and Engineering Management ( <a href="http://www.strath.ac.uk/dmem/">www.strath.ac.uk/dmem/</a> )		
Faculty	Faculty of Engineering ( <a href="http://www.strath.ac.uk/engineering/">www.strath.ac.uk/engineering/</a> )		
Staff Category	Knowledge Exchange	Reference No	99152
Reports To	The Head of Department, through the AFRC Chief Operating Officer and Team Leader	Grade:	8
Salary Range:	£39,992 - £49,149	Contract Type:	Fixed Term (until 31/03/2019)
FTE:	1 (35 hours/week)	Closing Date	Sunday, 7 January 2018

## Job Advert

The University of Strathclyde in Glasgow possesses a large internationally rated Engineering Faculty with a proud history of successful joint ventures with industrial and enterprise partners. As a part of the University's strategic development the Advanced Forming Research Centre (AFRC) has been established at Inchinnan near Glasgow's International Airport in partnership with multi-national companies such as Rolls-Royce and The Boeing Company. The AFRC is the embodiment of over £30 million collaborative investment by Industrial, Academic and Government partners to establish a world leading research facility for forging and forming technologies. Since 2011 it has been a part of the High Value Manufacturing Catapult.

The AFRC has invested significantly in developing a net shape manufacturing capability, encompassing cold rotary forming and forging processes and equipment. A Senior Manufacturing Engineer is sought to lead and develop research programmes and the delivery of projects at the AFRC. The role sought will be focussed on the development of novel net shape manufacturing processes, optimised component geometry for material input reduction and component integrity, and will be required to identify and deliver projects in these areas as well as build consortia for CR&D projects and stakeholder management across large work programmes. In this role you will be a key point of contact for net shape manufacture to both internal project work and external engagement. The post-holder will also be required to become part of relevant networks, for example HVM Catapult related fora, and become integral to the development of capabilities within the AFRC and as part of AFRC growth. The post-holder will also be required to develop relationships with key partners in the field of net shape manufacturing and optimised component design/manufacture.

To be considered for this role, you will either be educated to PhD level or be able to demonstrate significant relevant experience within an industrial environment. You will have knowledge and direct experience of net shape manufacturing techniques as well as component design and method of manufacture definition; you will be able to evidence relevant experience of leading projects in this area as well as engaging directly with customers and project partners. The post-holder will be expected to demonstrate and exert an interest in the area of net shape manufacturing and already have key relationships or be involved in relevant networks. You will have an established track record in identifying research or industrial projects as well as experience of supporting research and development in the context of manufacturing. You will have project management experience and able to lead projects. You will have an ability to plan and organise your own workload and the workloads of others, you will have excellent troubleshooting skills, including a methodical approach to solving complex problems, and an ability to work as part of a team. You will have excellent written and verbal communication skills, with an ability to interact with a range of stakeholders in both industry and academia and an ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

## Job Description

### Brief Outline of Job:

Under the guidance of the Team Leader, the Senior Manufacturing Engineer will support AFRC research programmes and the development of AFRC capabilities in net shape manufacturing and product design for optimised resource efficiency, including knowledge exchange with AFRC partners and customers. In particular, the post holder will be expected to lead and contribute to manufacturing engineering research programmes with a specific focus on delivering high integrity components with material and cost reduction solutions to support all areas of research and deliver solutions to the AFRC's industrial partners. To this purpose, the post holder will be also expected to collaborate with colleagues to ensure that knowledge exchange advances support AFRC advances; input to the AFRC strategy and business plan as a technology leader; and assist where required with other relevant knowledge exchange activities.

### Main Activities/Responsibilities:

1.	Use expert knowledge to develop new and innovative manufacturing optimisation opportunities using AFRC equipment and provide expert knowledge and advice to external partners and customers
2.	Provide expert guidance to research teams on net shape manufacturing and development of resource efficient solutions to research challenges.
3.	Lead and develop projects in the areas of net shape manufacture and process optimisation for optimal process.
4.	Identify and initiate relevant substantial funding opportunities (commercial and CR&D) in the relevant technology area and be able to develop consortia around funding opportunities.
5.	Responsible for the development, maintenance and adherence to quality systems within the workshop areas with support from the AFRC Quality Team.
6.	Plan and manage own workload, and the workloads of other staff and resources allocated to projects within the remit of this role.
7.	Write up reports for external organisations, and further write up findings for additional dissemination (e.g. professional publications or peer review journal publication) as appropriate.
8.	Present complex information at external and internal events to communicate AFRC capability periodically.
9.	Responsible for developing links across the wider university community and for the creation of collaborative project opportunities.
10.	Be responsible for developing links to external organisations and the development of subsequent funded work programmes
11.	Build contacts internally and externally, and participate in networks for the exchange of information, form relationships with customers, suppliers and colleagues for future collaboration.
12.	Respond to industrial enquiries for assistance in support of net shape manufacturing challenges and preparation of statements of work, quotations and funding applications.
13.	Identify areas of research or capability gaps within net shape manufacturing and draft proposals to fill this gap including identifying potential funding.
14.	Assisting in the training and development of staff and external clients in manufacturing engineering methods and processes.
15.	Contribute to collaborative decision making with colleagues on academic/engineering content in areas of research and knowledge exchange.
16.	Contributing to the overall AFRC growth by working as an integral part of the AFRC team effort, inputting to the research programme, capability development and departmental administrative activities, as necessary, to meet strategic objectives.
17.	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)

- E.1 Good first degree (minimum class 2:1) in a relevant engineering discipline i.e. mechanical engineering, engineering design, materials or manufacturing engineering, or equivalent industry experience.
- E.2 PhD in relevant engineering discipline, or equivalent relevant work experience.
- D.1 Chartered Engineer/Scientist, member of professional body in an appropriate discipline.

### Experience

- E.3 Knowledge and experience of manufacturing using net shape manufacturing techniques and of related design and analysis techniques for manufacture for resource efficient manufacturing
- E.4 Professional experience with net shape manufacturing processes and of manufacturing engineering either within an academic or industrial enterprise.
- E.5 Significant professional experience of problem solving and addressing manufacturing process challenges within an academic or industrial enterprise.
- E.6 Knowledge and experience of engineering design, ideally including CAD experience applied in an industrial context.
- E.7 Significant experience of analytical and/or experimental validation and verification techniques and approaches, for example design of experiments.
- D.2 Knowledge and experience of working with the High Value Manufacturing Catapult
- D.3 Knowledge and experience of hot and cold forming processes (e.g. hydroforming, rotary forging, shear forming, flow forming, radial forging)

### Job Related Skills and Achievements

- E.8 Evidence of contribution to the successful planning and delivery of projects within an academic or industrial environment.
- E.9 An ability to plan and organise own workload effectively without supervision from senior colleagues.
- D.4 Experience of knowledge exchange related activities, an ability to disseminate results and to contribute to research and commercial proposals.

### Personal Attributes

- E.10 Excellent verbal and written communication skills, with an ability to interact with a range of stakeholders in both industry and academia.
- E.11 An ability to work independently and as part of a team, through participation in collaborative projects, and developing evidence of leadership.

### Other Relevant Factors

- D.5 Evidence of the ability to lead a team and to listen, engage, persuade, and 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 before interview without permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter as a single document 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 Dr Alastair Conway, Senior Manufacturing Engineer and Near-Net Shape Manufacturing Team Leader (a.p.conway@strath.ac.uk, 0141 534 5223).

### Conditions of Employment

Conditions of employment relating to the Knowledge Exchange staff category can be found at: [Conditions of Employment](#).

### **Probation**

Where applicable, the successful applicant will be required to serve a 12 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](#).

### **Relocation**

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

### **Interviews**

Formal interviews for this post will be held on Thursday, 1 February 2018.

### **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.

