

# Senior Manufacturing Engineer (Composites)

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	80764
Reports To	The Head of Department, through the AFRC Chief Operating Officer	Grade:	8
Salary Range:	£39992 - £49149	Contract Type:	Fixed Term (36 months)
FTE:	1 (35 hours/week)	Closing Date	Sunday, 19 November 2017

## 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 is establishing a new Manufacturing team focusing on light-weighting of components and structures in recognition of a growing research and industrial demand for weight reduction in product manufacture for the benefit of the UK manufacturing sector. A Senior Manufacturing Engineer is sought to lead and manager research programmes and the delivery of high value projects at the AFRC. The role sought will be focussed on the development of composite material manufacture, optimised component geometry for weight reduction and component integrity of mixed material manufacture at the AFRC 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 light-weight and composite 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 composite material and optimised component design/manufacture.

To be considered for this role, you will either be educated to PhD level or be able to demonstrate equivalent relevant industrial experience within an industrial environment. You will have significant knowledge of composite manufacturing as well as component design and method of manufacture definition; you will be able to evidence relevant experience of leading high value 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 composite materials 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 significant experience of project planning and delivery as well as excellent communication and interpersonal skills, with a proven ability to interact with a range of stakeholders from industry and academia. 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. Lastly, the post holder will be required to make a significant contribution to the administrative activities of the AFRC including the membership/chair of relevant committees and acting in senior departmental/school administrative positions.

## Job Description

### Brief Outline of Job:

Under the guidance of the AFRC Executive Team, the Senior Manufacturing Engineer will lead AFRC research programmes and the development of AFRC capabilities in composite manufacture and product design for weight reduction, including knowledge exchange with AFRC partners and customers. In particular, the post holder will lead and contribute to manufacturing engineering research programmes with a specific focus on delivering component weight 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 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 composite/component weight reduction capabilities using AFRC equipment. Enhance the AFRC composites capability by anticipating future technical requirements and research needs, and providing direction in key technical area(s).
2.	Provide expert knowledge and advice to research teams, external partners and customers on composite materials and development of weight reduction solutions to research challenges.
3.	Lead individual and/or collaborative engineering research activities in the areas of visualisation, composite material manufacture and product design for weight reduction to determine appropriate research methods and contribute to the development of new research methods for industrial applications. Establish a distinctive development programme in relation to forming and generate interest through engagement with industry and professional bodies.
4.	Identify relevant funding opportunities (commercial and CR&D) in the relevant technology area and be able to develop consortia around funding opportunities. Apply as Principal or Co-Investigator, to appropriate external organisations for knowledge exchange funding and manage projects secured.
5.	Responsible for developing relationships in support of composite material manufacture, including AFRC member companies, to maintain positive working relationships and partnerships and the development of collaborative project opportunities.
6.	Write up reports for external organisations as lead author, and further write up findings for additional dissemination (e.g. professional publications or peer review journal publication) as appropriate.
7.	Present complex information at external and internal events to communicate AFRC capability periodically.
8.	Plan and manage own workload, and the workloads of other staff and resources allocated to projects within the remit of this role.
9.	Identify opportunities for strategic development of new projects by building contacts internally and externally, participating in networks for the exchange of information, form relationships with customers, suppliers and colleagues for future collaboration.
10.	Build contacts internally and externally, and participate in networks for the exchange of information, form relationships with customers, suppliers and colleagues for future collaboration.
11.	Respond to industrial enquiries for assistance in support of composite/weight reduction manufacturing challenges and preparation of statements of work, quotations and funding applications.
12.	Identify areas of research or capability gaps within composite manufacturing and draft proposals to fill this gap including identifying potential funding opportunities.
13.	Assist in the training and development of staff and external clients in manufacturing engineering methods and processes.
14.	Responsible for the development, maintenance and adherence to quality systems within the workshop areas with support from the AFRC Quality Team
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)

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| 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

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| E.3  | Knowledge and experience of manufacturing using composite materials and of related design and analysis techniques for manufacture for composite methods   |
| E.4  | Professional experience with composite materials and of manufacturing engineering either within an academic or industrial enterprise.   |
| E.5  | Significant professional experience developing and maintaining customer and supplier relationships  |
| E.6  | Knowledge and experience of engineering design, ideally including CAD experience applied in an industrial context.  |
| E.7  | Knowledge of relevant networks in the UK for development of composite manufacturing capabilities at AFRC  |
| E.8  | Significant experience successfully delivering high value projects  |
| E.9  | Established personal track record in carrying out knowledge exchange projects   |
| E.10 | Sufficient knowledge and skills to be able to establish and maintain a network of relevant contacts, and ensure credibility within external partnerships  |
| E.11 | Ability to plan and organise knowledge exchange programmes, and to pull together teams of academic professional staff and others as appropriate, to ensure project delivery for the client and benefits to the University |
| E.12 | Demonstrable track record in developing high quality knowledge exchange proposals and playing a leading role in attracting knowledge exchange funding   |
| D.2  | Knowledge and experience of working with the High Value Manufacturing Catapult  |
| D.3  | Experience of delivering commercial projects in the field of manufacturing, composite materials and component assessment  |

### Job Related Skills and Achievements

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| E.13 | Evidence of contribution to the successful planning and delivery of projects within an academic or industrial environment.                     |
| E.14 | 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

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| E.15 | Excellent verbal and written communication skills, with an ability to interact with a range of stakeholders in both industry and academia.      |
| E.16 | An ability to work independently and as part of a team, through participation in collaborative projects, and developing evidence of leadership. |

### Other Relevant Factors

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| 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 |
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## 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 Lynne O'Hare, Senior Business Development Manager (lynne.o-hare@strath.ac.uk/0141 534 5257).

### Conditions of Employment

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

### Pre-employment health screening

An offer of appointment will be subject to a medical assessment by Occupational Health. An individual who accepts an offer of employment must complete a confidential medical questionnaire and forward it to the Occupational Health Nurse within 5 days of receipt. If further information is required the individual may be contacted by the OHN or a Medical Advisor and a personal appointment with the individual may be arranged. An unconditional contract of employment will not be issued until Human Resources receives confirmation that applicant is fit to undertake the duties of the post.

### 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 in December 2017.

### 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.

