



Senior Digital Process Manufacturing Engineer

Centre	National Manufacturing Institute Scotland (NMIS) (https://www.nmis.scot/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Knowledge Exchange	Reference No	519532
Reports To	Head of DPMC	Grade:	8
Salary Range:	£45585 - £56021	Contract Type:	Open Contract
FTE:	1 (35 hours/week)	Closing Date	Sunday, 28 July 2024
Holidays	31 annual leave & 11 public holidays Option to purchase additional holidays		
Pensions	Contributory pension scheme available to all staff including generous employer contribution.		
Training	Professional Development with Organisational and Staff Development Unit (OSDU) plus external training if required		
Family Friendly Benefits	Generous parental leave provision and options for flexible working		
Health and Wellbeing	University Sport centre, Occupational Health service, access to health and wellbeing events, cycle to work scheme, Employee Assistance Programme, agile working and established carers support network and carer friendly policies		

Job Advert

The University of Strathclyde in Glasgow (Times Higher Education Awards University of the Year 2019 and Scottish University of the Year 2020) possesses a large and internationally leading Engineering Faculty with a proud history of securing major funding for projects from government and other funding agencies and in operating successful joint ventures and partnerships with industrial organisations.

NMIS is partnering with the Centre for Process Innovation and North Ayrshire Council to develop the Digital Process Manufacturing Centre (DPMC) at i3 in North Ayrshire, Scotland. The Centre demonstrate, develop and deliver digital technology to support the UK's process manufacturing sectors' digital challenges.

DPMC will offer practical demonstrations of Industry 4.0 technology to stimulate, encourage and support industry to adopt new and innovative practices in the application of digital strategies to their manufacturing operations by offering hands-on experience. The demonstrations will include a range of opportunities for industry to gain access to examples of control systems, manufacturing execution systems, operational technologies, Augmented Reality, paperless systems, training, performance management, data visualisation techniques, etc. This experience, available in a controlled environment, aims to improve levels of confidence and demonstrates how digital can improve management decision-making, driving business performance and competitiveness. The physical facility, which will include a networking / training / meeting space, will serve as a focal point and networking hub for companies in the area.

The centre will focus key process sub-sectors including:

- Pharmaceuticals
- Oil & Gas
- Chemicals and Chemical Products
- Agrichemicals
- Food & Drink
- Fast Moving Commercial Goods
- Water (collection, treatment, supply)

For more information, visit the National Manufacturing Institute Scotland (NMIS) Website:

<https://www.strath.ac.uk/workwithus/nationalmanufacturinginstitutescotland/>

or email NMIS-recruitment@strath.ac.uk

DPMC is seeking to appoint an experienced and enthusiastic Senior Digital Process Manufacturing Engineer, to lead and manage delivery of high value industry focused research and knowledge exchange programmes, the adoption of digital technologies in the processing sector through experience and applied experimental research activity, and introduce the outcomes into process manufacturing environments. This will involve the candidate anticipating the direction of process manufacturing capability to develop a credible technical roadmap and research strategy and deliver industrial research projects.

The Senior Digital Process Manufacturing Engineer will also lead, manage and develop the DPMC team with the aim of building a world-leading community of digital technology developers and implementers and process industry experts in Strathclyde. The post holder will be expected to work between DPMC and its industrial partners and there will be a strong emphasis on knowledge exchange and process improvement.

To achieve the above the Senior Digital Process Manufacturing Engineer will require significant research and/or industrial experience in at least two of the following technical areas:

- Knowledge and experience of an industrial design and manufacturing environment including the various kinds of manufacturing equipment and technologies common across industry
- Good understanding of process engineering design including gated design reviews to diligently de-risk system designs.
- A broad knowledge of digital technology and process industry activities to mature the technology readiness of system designs and implementation of translational research into industry.
- Knowledge of digital tools including process design, sensors, automation, PLC/SCADA, MES, ERP, business intelligence.
- Good understanding of how digital technologies can be used in the processing sector to drive efficiencies.

The post holder will require the knowledge and skills normally associated with significant industrial experience or a first degree and PhD. The post holder will have an established track record in leading the delivery of engineering solutions in an industrial context, as well as experience of taking a leading role in research and development of manufacturing processes.

The post holder will have the ability to work autonomously, to plan and prioritise their own workload with minimal inputs from higher management, and deal with complex problems presented to them by colleagues. The post holder will also need 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. The post holder will be required to make a significant contribution to the administrative activities of DPMC including membership/chair of relevant committees and acting in senior departmental administrative positions. As part of the role involves managing staff members within the centre, the post holder will have the ability to line manage and lead a team, including undertaking capability development, recruitment activities, allocating work, managing outputs and performance management.

The role will also require travel between DPMC and NMIS HQ in Renfrewshire as required by project and wider NMIS workload.

Job Description

Brief Outline of Job:

With minimal guidance from the DPMC Director, the Senior Digital Process Manufacturing Engineer will lead, manage and develop Manufacturing Engineers, Design Engineers, research, and other staff. They will also build a credible research direction through appropriate technology road-mapping techniques and deliver a portfolio of industry based knowledge exchange and development projects, which will be delivered predominantly by working closely with DPMC staff, industrial partners and colleagues across the wider NMIS Group and University, and through strategic alliances with other institutions.

The post holder will be responsible for ensuring the successful delivery of a range of direct and CR&D funded projects, to pursue and establish high quality knowledge exchange programmes, including securing research funding and contracts. They will

lead or support research programmes to ensure delivery of associated objectives and engage as appropriate in relevant research activities; and to carry out administrative tasks assigned by the DPMC Director.

Duties will include: technology road-mapping and direction setting; line management of staff members, including capability development, supporting recruitment, and tasking, training and target-setting; technical consultancy, including acting as a point of contact for customer enquiries and developing/costing of work proposals; and project delivery.

Main Activities/Responsibilities:

1.	Lead on the research and development of new and innovative digital process manufacturing activities; applying knowledge of digital technologies and the processing sector during the design and development of process manufacturing lines; liaising with DPMC industrial partners to implement DPMC strategies.
2.	Lead individual and/or collaborative engineering research or knowledge exchange activities to determine appropriate digital processing strategies for different industrial applications and contribute to the development of new research areas relating to industrial and commercial applications.
3.	Identify new approaches/techniques or technologies and ensure that any IP generated is recognised and managed appropriately.
4.	Provide expert guidance to research teams in area of digital technologies and process manufacturing and to ensure robust and impactful solutions are developed in response to industry challenges.
5.	Enhance the DPMC digital process manufacturing capability by anticipating future technical requirements and research needs and providing direction on state-of-the-art approaches, new readiness level frameworks to support emerging industrial strategies, industrial digital technologies and other supporting areas.
6.	Line manage staff members of the DPMC, providing direction, support and guidance. Ensure capability development, support recruitment activities, allocate work, manage outputs and performance manage, as required.
7.	Responsible for developing relationships with DPMC and NMIS member companies, maintaining positive working relationships, partnerships and the development of collaborative project opportunities.
8.	Respond to industrial enquiries for assistance in support of challenges and preparation of statements of work, quotations and funding applications.
9.	Lead larger project teams to deliver against specific requirements of research and knowledge exchange programmes.
10.	Plan and manage workload, with minimal guidance from DPMC Director. Provide leadership by coordinating the work of others to ensure delivery of programmes.
11.	Identify opportunities for strategic development of new projects by building contacts internally and externally, participating in networks for the exchange of information, and by forming relationships with customers, suppliers and colleagues for future collaboration. Identify and initiate substantial funding opportunities (commercial and CR&D) in the relevant technology area and develop consortia around funding opportunities.
12.	Write up reports, individually or in collaboration with colleagues, for external organisations, and further write up findings for additional dissemination (e.g. professional publications or peer review journal publication) as appropriate.
13.	Assist in the training and development of staff and external clients.
14.	Influence decision making amongst colleagues as part of collaborative activities particularly relating to own areas of expertise.
15.	Contribute to overall DPMC growth by working as an integral part of the DPMC team effort, inputting to the research programme and capability development, as necessary, to meet strategic objectives.
16.	Contribute to and play an active role in the growth and development of the DPMC Community, sharing good practice and expertise, and supporting colleagues through shared experience. Ensuring awareness and collaboration with other NMIS Technology Themes.
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)

E1 Good first degree (minimum class 2:1) and PhD or equivalent significant professional experience in a relevant industry setting in a relevant engineering discipline

D1 Incorporated / Chartered Engineer/Scientist, Member of professional body in an appropriate discipline

Experience

E2 Significant knowledge of process industry or digital technologies

E3 Knowledge and experience of different types of process manufacturing equipment and associated design and performance considerations

E4 Good knowledge, understanding and experience of process planning and manufacturing activities for high integrity products and systems

E5 Experience in leading and taking technical ownership of specific areas to research independently and manage the work of teams

E6 Experience of high integrity digital and/or process engineering in an academic or industrial context

E7 Demonstrable track record in developing and delivering high quality proposals and playing a leading role in attracting funding for project initiatives (internally/externally)

E8 Significant knowledge and skills to be able to establish and maintain a network of relevant contacts, and ensure credibility within external partnerships

E9 Significant experience and track record in defining and implementing process manufacturing activities including the use of appropriate industrial digital technologies

D2 Knowledge and experience associated with collaboration with third party suppliers (i.e. vendors, test houses etc) in the context of product and system development

Job Related Skills and Achievements

E10 Significant professional experience of problem solving and addressing process manufacturing challenges

E11 Ability to plan and organise own workload effectively with general supervision from senior colleagues

E12 Ability to develop, plan and organise projects or programmes across a range of settings whether research or industrial. With ability to build working teams with Professional, Research and Academic staff as appropriate

E13 Experience of multi/inter-disciplinary knowledge exchange and research

Personal Attributes

E14 Excellent written and verbal communication skills, with an ability to interact with a range of stakeholders in both industry and academia

E15 Ability to influence stakeholders, internally and externally, at varying levels and ability to convey compelling arguments with complex technical information

E16 Demonstrable ability to line manage and lead a team, including undertaking capability development, recruitment activities, allocating work, managing outputs and performance management, as required

E17 Experience of disseminating results and contributing to research and commercial proposals

E18 An ability to work as part of a team, through participation in collaborative projects

E19 Ability to develop new areas and manage associated ambiguity as new research themes emerge

Other Relevant Factors

E20 An ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences

D3 Current full UK driving licence

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 Stephen Fitzpatrick, Director of Digital Factory (s.fitzpatrick@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to Knowledge Exchange Staff can be found here: [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](#).

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 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 gender equality in academia across all academic disciplines and professional and support functions.

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.

