

Candidate Information

Position: Technical Lead Composites
School/Department: AMIC
Reference: 25/112979
Closing Date: Monday 24 November 2025
Salary: £51,016 - £62,695 per annum
Anticipated Interview Date: Wednesday 3 December 2025
Duration: 3 Years

JOB PURPOSE AND IMPACT:

We are seeking Technical Lead who is passionate about innovative technology to play a major role in the leadership, management and expansion of applied research, innovation and knowledge transfer in composite design, processing and testing.

You will lead and develop a team of engineers, scientists and technicians in the strategic direction and delivery of multiple concurrent composite projects across AMIC. This requires managing diverse composite manufacturing processes and validation methodologies. You will work in collaboration with different technology areas, the wider sustainable polymer and composite team, technology providers, national technology centres, academia and industry to deliver key projects, develop regional and international links, and secure partnerships and funding.

You will support senior managers with a proactive approach in the identification, technical specification and delivery of new and novel materials & technology capabilities and strategies that will have a direct technical, economic and reputational benefit to AMIC, industry and Northern Ireland.

MAJOR DUTIES:

Technical Leadership for Research, Innovation and Knowledge Transfer

1. To initiate, undertake, manage and supervise research and development in composite design, processing and testing of the highest international quality, to sustainably grow AMIC as a world-class centre that successfully combines leading edge research with knowledge transfer, commercialisation and economic impact.
2. Support development and implementation of technology roadmaps and strategies for composite manufacturing, as a basis for identifying and implementing new and novel technology capabilities within AMIC.
3. Manage and provide leadership for multi-disciplinary composite research projects and teams, including staff training and development, delivery of technical skills training, monitoring performance and reporting.
4. Work collaboratively within AMIC and with industry to plan and deliver key projects, lead the strategic development and optimisation of composite processing capabilities across multiple technologies (e.g. DFP, Press Moulding, Autoclave, RTM, Vacuum Infusion, etc) to meet industry and research requirements, ensuring quality of delivery at all times.
5. Drive innovation in composite manufacturing through integration of digital technologies, process validation methodologies, and correlation between manufacturing, testing and simulation.

Building collaboration and partnerships

6. To work closely with AMIC staff, the wider sustainable polymer and composite team, technology providers, national centres, Queen's academic staff, with industry and government agencies in all aspects relating to composite technology transfer.
7. Create new cross-disciplinary groupings and projects of strategic importance to AMIC and Queen's University Belfast in composite manufacturing and validation.
8. To initiate, develop and manage R&D links with composite industry partners nationally and internationally.

Contributing to AMIC's success and impact

9. Assist in winning funding from industry and government sources (nationally and internationally) to grow composite manufacturing research in line with AMIC's long-term strategic plans (supported by Head of Group, CTO and Business Development function).
10. Play a leading role in developing the international reputation of composite research at Queen's through presentations, attendance at trade shows and through visiting major companies world-wide as required.
11. Oversee safe operation of composite processing equipment and ensure compliance with standard operating procedures and Health and Safety guidance across the team.
12. Any other duties commensurate with the role that may reasonably be requested by management.

ESSENTIAL CRITERIA:

1. Honours Degree, or equivalent, in related engineering discipline or a HND in a related discipline with substantial relevant experience working in a similar role.
2. Substantial relevant experience managing multifaceted industrial-focused composite research & development projects on time and within budget.
3. Demonstrated technical evidence in engineering and composite materials science through impactful outcomes.
4. Evidence of in-depth expertise in composite processing and validation, including:
 - a. Strategic oversight of multiple composite manufacturing processes (e.g. DFP, press moulding, autoclave, RTM, infusion, etc).
 - b. Process validation methodologies and correlation between manufacturing, testing and simulation.
 - c. Integration of digital technologies and advanced manufacturing techniques.
 - d. Design for manufacture principles across composite materials and structures.
5. Demonstrable experience leading process development, optimisation and implementation across multiple concurrent composite projects.
6. Evidence of effective of collaborative working, team leadership and project leadership to deliver effective outcomes.
7. Experience of building networks of industrial and research stakeholders with success in securing partnerships and/or funding.
8. Applied knowledge of safety, risk, and regulatory compliance in manufacturing environments.
9. Evidence of strategic collaboration with suppliers and teams to meet quality and delivery standards.
10. Ability to communicate complex technical information to range of audiences through effective written reports and presentations.
11. Flexibility to work outside of standard working times and undertake national or international travel may be required to meet the responsibilities of the post and needs of stakeholders.

DESIRABLE CRITERIA:

1. Postgraduate and/or professional qualification in a relevant discipline.
2. Experience of working with international OEMs and SMEs in composite manufacturing sectors.
3. Experience of project management and/or project management qualification (e.g. PRINCE2, APM or equivalent).
4. Understanding of technology readiness levels (TRL) or manufacturing readiness levels (MRL) and leading processes and projects to maturity.
5. Experienced in design for manufacture of composite components, mould design and tooling development strategies.
6. Experience with process or structural simulation software (e.g. Moldex, DIGIMAT, ABAQUS, ANSYS) and integration into composite manufacturing workflows.
7. Experience with composite characterisation methods including destructive and non-destructive testing techniques.
8. Experience with manufacturing automation technologies and digital manufacturing integration.
9. Familiarity with working on development of sustainable polymer supply chains and circular economy principles.
10. Experience working to aerospace or automotive management systems and quality frameworks.
11. Track record in leading and developing collaborative research projects with funding bodies such as UKRI, ATI, APC, EU Horizon.