ROLE PROFILE

Job Title: Aerospace Research Project Engineer  
School/Department: Faculty of Engineering – Centre for Aerospace Manufacturing  
Job Family and Level: Administrative, Professional and Managerial Level 4  
Contract Status: This post will be offered on a fixed-term contract for 2 years  
Hours of Work: Full-time (36.25 hours per week)  
Location: Easter Park Facility and Jubilee Campus (as required)  
Reporting to: Centre Manager, Centre for Aerospace Manufacturing

Purpose of the New Role:  
The Centre for Aerospace Manufacturing (CAM) requires an experienced and skilled mechanical engineer to join our team. The role will involve application of a range of professional engineering skills relating to the development, design, manufacturing, commissioning and use of aerospace automated assembly facilities in support of CAM research. This role encompasses all aspects of the mechanical system including control and instrumentation and the role holder will be expected to capture and analyse test data. Working as part of a small team the post holder will assume a significant role in implementing automated aerospace assembly and tooling projects. This includes taking responsibility for the technical deliverables in some projects and project management activities. Liaison with academics, researchers, technical colleagues will form a part of the role. This post may involve travel to partner sites across Europe.

Main Responsibilities

<table>
<thead>
<tr>
<th>Main Responsibilities</th>
<th>% time per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Research and Technical Activities:</td>
<td>70%</td>
</tr>
<tr>
<td>• Designing and developing automated aerospace assembly cells, tooling and test fixtures.</td>
<td></td>
</tr>
<tr>
<td>• Managing installation and commissioning of automated aerospace assembly cells, tooling and test fixtures.</td>
<td></td>
</tr>
<tr>
<td>• Developing build philosophies, tooling philosophies and metrology plans for the assembly of aerospace research demonstrators.</td>
<td></td>
</tr>
<tr>
<td>• Developing automated assembly processes and associated tooling, in line with TRL/MRL requirements and demonstrating process capability.</td>
<td></td>
</tr>
<tr>
<td>• Carrying out testing on assembly cells, fixtures and automated processes, conducting appropriate data analysis and reporting.</td>
<td></td>
</tr>
<tr>
<td>• Development, integration and programming of automated systems e.g. robots, process end effectors, measurement and data acquisition systems etc.</td>
<td></td>
</tr>
<tr>
<td>2. Project Management:</td>
<td>15%</td>
</tr>
<tr>
<td>• Developing project plans, work plans and schedules in collaboration with senior colleagues and project stakeholders.</td>
<td></td>
</tr>
<tr>
<td>• Defining research objectives in collaboration with senior colleagues and project stakeholders.</td>
<td></td>
</tr>
<tr>
<td>• Managing resources in order to achieve research outputs.</td>
<td></td>
</tr>
<tr>
<td>• Organising and participating in project meetings and technical workshops.</td>
<td></td>
</tr>
<tr>
<td>• Tracking and reporting project process and spend.</td>
<td></td>
</tr>
</tbody>
</table>
3. Proposal Development:
   - Supporting proposal development & submission to regional, national and European funding bodies, and industry.  
   5%

4. Engagement:
   - Initiating industrial and academic partnerships with relevant organisations.
   - Interacting with research partners and industrial partners (and their supply chain) to establish industrial requirements & specifications and drive the development of new and innovative systems based on customer requirements (potentially spending time at partner sites).
   - Participating and presenting at relevant meetings.
   5%

5. Other:
   - Developing specifications and supporting procurement of equipment, tooling, parts, instrumentation and system integration for CAM aerospace automated assembly cells.
   - Generating assembly cell and fixture related documentation including risk assessments, safe operating procedures, design reports and commissioning reports.
   - Any other duties associated with the role.
   5%

### Knowledge, Skills, Qualifications & Experience

<table>
<thead>
<tr>
<th></th>
<th>Essential</th>
<th>Desirable</th>
</tr>
</thead>
</table>
| **Qualifications/ Education** | • BEng or equivalent in Mechanical/ Manufacturing/ Aerospace/ Automotive Engineering.  
  • Meng or MSc in Mechanical Engineering, or equivalent. | • PhD or equivalent in a relevant field.  
  • Professional qualification in engineering. |
| **Skills/Training**     | • Proven overall concept and design skills applied to complex assembly cells and fixtures or similar.  
  • Skilled in the use of at least one 3D CAD package e.g. CATIA  
  • Strong understanding of mechanics.  
  • Understanding of manufacturing processes, assembly processes and fixtures and tooling.  
  • Knowledge of process automation.  
  • Broad familiarity with instrumentation and development of data acquisition systems.  
  • Skilled in programming industrial robots.  
  • Clear communication skills and stakeholder management at all levels.  
  • Strong team working skills. | • Knowledge of systems engineering involving the coupling or embedding of large software projects to hardware.  
  • Knowledge of aerospace industry engineering requirements. |
| **Experience**          | • Experience of planning and implementing complex assembly cells and fixtures or similar.  
  • Experience of project management.  
  • Experience and competence in technical problem solving.  
  • Experience in design, build and test of test equipment and rigs.  
  • Experience of working in a research environment.  
  • Experience of working on regional, national or European funded projects. | • Experience of procurement, installation & commissioning of assembly cells and fixtures or similar |
| **Personal Attributes** | • Flexible and proactive outlook.  
  • Ability to work unsupervised to tight deadlines. | |
Innovative and creative problem solver.
Excellent communication skills.

Statutory/Legal
The interpretation and implementation of work related regulations and procedures and an understanding of non-compliance on other staff and the University (e.g. Health and Safety).

Additional Information
This role requires dealing with the challenges of managing research projects, investigating different research areas, and resolving conflicting priorities. Managing unexpected situations, working proactively, collaborating with colleagues in the Faculty of Engineering, industrial and research partners, suppliers and customers, as well as working independently and with a high degree of personal initiative are all essential.

The University of Nottingham strongly endorses Athena SWAN principles, with commitment from all levels of the organisation in furthering women’s careers. It is our mission to ensure equal opportunity, best working practices and fair policies for all.