**Job Title:** Research Associate in Terahertz waveguides for particle acceleration – simulation and design (Cockcroft Institute)  
**Salary:** Grade 6P

<table>
<thead>
<tr>
<th>Department/College:</th>
<th>Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directly responsible to:</strong></td>
<td>Dr Rosa Letizia &amp; Prof Graeme Burt</td>
</tr>
<tr>
<td><strong>Supervisory responsibility for:</strong></td>
<td></td>
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</tbody>
</table>

**Other contacts**

**Internal:**  
All Lancaster Cockcroft staff and students

**External:**  
Cockcroft Institute academic and post-doctoral staff, PhD students, professional engineering, scientific and technical staff at STFC Daresbury Laboratory.

**Major Duties**
To take a leading role on the design and optimisation of THz and optical frequency structures, both dielectric and metallic, for charged particle acceleration.

This will include:
- Performing electromagnetic and particle interaction modelling for THz and optical frequency structures.
- Carry out simulation and physical design associated with manufacture of structures.
- Assist with experimental studies in the characterisation of manufactured dielectric and metallic structures.
- Taking a leading role in the electromagnetic simulation tasks for the multi-disciplinary experiments in THz and optical frequency driven particle beam acceleration.
- Contribute and lead publication of results in peer reviewed journals.
- Work with PhD students undertaking research within the THz acceleration programme
- Liaise with collaborators at ASTeC, Manchester & Liverpool
- Present results at appropriate conferences

**Other Duties**
Perform administrative duties related to the Cockcroft Institute education programme.