



<b>Job title</b>	Research Fellow in Optical Metrology Uncertainty Analysis	<b>Job family and level</b>	Research and Teaching Level 4
<b>School/ Department</b>	Facility of Engineering – Advanced Manufacturing Research Group	<b>Location</b>	Advanced Manufacturing Building, Jubilee Campus

## Purpose of role

The research fellow will conduct research into surface metrology using optical technologies and develop analysis methods using machine learning models. This will include in-process measurement applications. It is essential that the candidate has a track record of working with machine learning models.

	<b>Main responsibilities</b> (Primary accountabilities and responsibilities expected to fulfil the role)	<b>% time per year</b>
1	To carry out research into uncertainty analysis for optical surface metrology for advanced manufacturing applications. To plan and conduct research using recognised approaches, methodologies and techniques within the research area.	55%
2	To write up research work for publication and/or contribute to the dissemination at national/international conferences, resulting in successful research outputs.	30%
3	To supervise undergraduate and/or postgraduate students projects and placements, as appropriate. To participate in the assessment of student knowledge and co-supervise projects at Masters level.	10%
4	Any other duties appropriate to this post as required by their line manager	5%

## Person specification

	Essential	Desirable
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Specialist research skills and techniques to include understanding of any of the following:               <ul style="list-style-type: none"> <li>- Optical instruments</li> <li>- Surface measurement</li> <li>- Uncertainty analysis</li> </ul> </li> <li>• Excellent oral and written communication skills, including the ability to communicate with clarity on complex information.</li> <li>• High level organisational skills</li> <li>• Ability to creatively apply relevant research approaches, models, techniques and methods.</li> <li>• Strong skills in model development</li> <li>• Ability to assess and organise resource requirements and deploy effectively.</li> <li>• Ability to build relationships and collaborate with others, both internally and externally</li> <li>• Ability to manage workload, plan and work independently to reach a project goal</li> </ul>	<ul style="list-style-type: none"> <li>• Published material in uncertainty analysis</li> </ul>
<b>Knowledge and experience</b>	<ul style="list-style-type: none"> <li>• Optical surface metrology and uncertainty analysis experience</li> <li>• Some practical experience of applying the specialist skills and approaches and techniques required for the role</li> </ul>	<ul style="list-style-type: none"> <li>• Experience of developing new approaches, models, techniques or methods in research area.</li> </ul>
<b>Qualifications, certification and training (relevant to role)</b>	<ul style="list-style-type: none"> <li>• PhD in optical metrology</li> </ul>	



The University 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.

## Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University’s strategy, vision and values. The following are essential to the role:

- Valuing people** Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
- Taking ownership** Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
- Forward thinking** Driven to question the status quo and explore new ideas, supporting the team to “lead the way” in terms of know-how and learning.
- Professional pride** Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
- Always inclusive** Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

## Key relationships with others

