



## JOB DESCRIPTION

<b>Job Title:</b>	Postdoctoral Research Associate
<b>Department / Unit:</b>	Mathematics
<b>Job type</b>	Full-Time, Fixed-Term, Professional Services
<b>Grade:</b>	RHUL 7
<b>Accountable to:</b>	Principal Investigator
<b>Accountable for:</b>	N/A
<b>Purpose of the Post</b>	
To be an active member of the department and the multi-university multi-disciplinary group working on the research project 'Integrated autofluorescence-Raman spectroscopy (AF-Raman) for intra-operative assessment of sentinel lymph node biopsies in breast cancer surgery' so that the overall research objectives of the project are met. The role holder will be expected to produce independent, original contributions to the subject area.	
<b>Key Tasks</b>	
<b>Research</b> <ul style="list-style-type: none"> <li>• Design and implement novel algorithms, models and methods in line with the project's research objectives</li> <li>• Design, analyse and refine appropriate experiments to validate and test research hypotheses</li> <li>• Identify new avenues and directions for future research.</li> </ul>	
<b>Writing, publication and presentation for academic audiences</b> To write up research work for publication in disciplinary peer-reviewed academic journals and contribute to their dissemination at national/international conferences.	
<b>Building external stakeholder relationships and networks</b> <ul style="list-style-type: none"> <li>• To coordinate relationships and meetings with research partners and external stakeholders to develop and deliver knowledge exchange towards impact.</li> <li>• Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings within boundaries specified by relevant commercialisation constraints.</li> </ul>	
<b>Impact and dissemination with non-academic audiences</b> <ul style="list-style-type: none"> <li>• To plan and generate impact-focused material to reach and influence non-academic audiences as appropriate.</li> <li>• Liaise on a regular basis with colleagues and students and build contacts and participate in internal networks for the exchange of information and to form</li> </ul>	

relationships for future collaboration. To contribute to RHUL's public engagement programme by establishing links with local community groups, industries etc.

- Join external networks to share information and ideas within boundaries specified by relevant non-disclosure agreements.

#### **Administrative support**

- To provide administrative support to the Principal Investigator and research team, as required to deliver the project's core aims and objectives.
- To carry out routine administrative tasks associated with the research project to ensure that project is completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.

#### **Other Duties**

The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the University. The post holder will be expected to undertake other duties as appropriate and as requested by their manager.

The post holder may be required to work at any of the locations at which the business of Royal Holloway is conducted, including at the project partner's location.



## PERSON SPECIFICATION

Details on the qualifications, experience, skills, knowledge and abilities that are needed to fulfil this role are set out below.

**Job Title:** Postdoctoral Research Associate

**Department:** Mathematics

	Essential	Desirable	Tested by Application Form/Interview/Test
<b>Knowledge, Education, Qualifications and Training</b>			
PhD in relevant subject area (or near completion of - it is expected that the appointee will have their PhD awarded within 4 months of the start date)	X		Application Form
Proven knowledge of research techniques and methodologies of mathematics, statistics, computing and machine learning	X		Application Form, Interview
Demonstrable comprehensive knowledge in the subject area	X		Application Form, Interview
Knowledge of techniques for developing mathematical and statistical models or applications, knowledge of image analysis, geometric or topological data analysis, chemometrics, biophysics, bioengineering		X	Application Form, Interview
<b>Skills and Abilities</b>			
Excellent communication skills	X		Application Form, Interview
Ability to present complex information effectively to a range of audiences	X		Application Form, Interview
Scientific programming (e.g. Matlab or Python)	X		Application Form, Interview
<b>Experience</b>			
Evidence of a good quality publication record in publications	X		Application Form, Interview
Evidence of contributing to research bids		X	Application Form, Interview
Practical experience of applying specialist skills and techniques required for the role		X	Application Form, Interview