## JOB DESCRIPTION

### Vacancy Ref: A3574

<table>
<thead>
<tr>
<th>Job Title:</th>
<th>Senior Research Associate (Grade 7) or Research Associate (Grade 6)</th>
<th>Present Grade:</th>
<th>6 (24) or 7(31)</th>
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</thead>
<tbody>
<tr>
<td>Department/College:</td>
<td>Lancaster Medical School</td>
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<td>Directly responsible to:</td>
<td>Dr Luigi Sedda</td>
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<td>Supervisory responsibility for:</td>
<td>N/A</td>
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### Other contacts

**Internal:**
Staff in the Faculty of Health and Medicine and staff in the Faculty of Science and Technology, Lancaster University staff with similar/complementary research or teaching interests and Professional Services staff.

**External:**
Liverpool School of Tropical Medicine, University of Notre Dame, University of California San Francisco, project partners, professional bodies, Research Governance Teams, research funding bodies and councils, academic and research networks.

### Major Duties

- Support (grade 6)/ generate (grade 7) Gaussian spatio-temporal simulation for sample size calculations;
- Provide conventional sample size calculation for geographic processes;
- Spatio-temporal modelling of epidemiological and entomological data: inference of parameters and estimation (mapping);
- Develop field based sampling strategies based on epidemiological and entomological modelling (adaptive sampling designs);
- Design (grade 7)/ deploy (grade 6) dynamic spatio-temporal models for the description of disease/mosquito spread (grade 7);
- Provide optimization of locations, and revisions of statistical framework based on increased data availability;
- Generation of local and national distribution maps, exceedance maps and hotspot maps;
- Develop R-based stand alone tools for optimisation of spatial sampling designs (grade 7);
- To supervise undergraduate and postgraduate students for studies relevant/related to the projects;
- To travel within UK and oversees;
- To report research findings in the form of conference abstracts or talks at local and national events/conferences.
- To lead (grade 7) or support (grade 6) the drafting of scientific manuscripts, reports to funders and other materials for other audiences based on the results from research studies in collaboration with the line manager and the project partners;
- To provide regular progress reports to all project partners;
- To attend meetings and workshops presenting research results and networking;
- To undertake any other duties as may be requested by Dr Sedda, as appropriate to the grade of the post.