### Purpose of role

An exciting opportunity has arisen for an ambitious PhD (or soon to be) qualified Engineer to design and develop a sensing platform based on optical fibre sensors functionalised with capture layers for the rapid, sensitive and efficient detection of zoonotic pathogens. Construction of the device involves the fabrication of optical fibre sensors, their characterisation, integration within a needle enabling detection in both liquid and tissue samples, development of an opto-electronic measurement. The project is a multidisciplinary collaboration between Optics and Photonics research group and School of Veterinary Medicine and Science within the University of Nottingham. Candidates should hold, or be close to completing, a PhD in Electronic, Biomedical or Optical Engineering.

### Main responsibilities

(Primary accountabilities and responsibilities expected to fulfil the role)

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<th>% time per year</th>
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<td>To deliver research as part of a collaborative multidisciplinary team and contribute to the achievement of specific research objectives.</td>
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<td>2</td>
<td>Support of other ongoing proof of concept projects.</td>
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<td>3</td>
<td>Present the results of research at project progress meetings and at conferences</td>
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<td>4</td>
<td>Write papers for submission to peer-reviewed journals and conferences.</td>
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## Person specification

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<th>Essential</th>
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| **Skills**     | • Ability to build strong alliances with colleagues and stakeholders, develop network of contacts and builds trust  
                  • Establishes credibility and works cooperatively with others  
                  • Written and verbal communication is clear, well-structured and easy to understand  
                  • Awareness and understanding of clinical studies  
                  • Organised and methodical with ability to manage own time and workload effectively against project milestones and/or agreed standards of work  
                  • Monitors the progress of work against project milestones and/or agreed standards of work  
                  • Able to analyse data and carefully present data for presentation  
                  • Sees self as a member of a team  
                  • Plans and coordinates own work to meet objectives and development plans  
                  • Flexible approach to problem solving  
                  • Excellent IT skills  | • Develops new approaches to improve or replace existing procedures or systems  
                  • Approachable and receptive  
                  • Adapts communication to suit the audience |
| **Knowledge and experience** | • Practical experience in the implementation of fibre optic biosensors  
                  • Practical experience with fabrication of fibre optic bio/chemical sensors  
                  • Data capture, signal processing, data analysis and report writing to a professional standard  
                  • Good knowledge of opto-electronics systems  | • Experience of biosensors studies and the regulatory process  
                  • Experience in programming in two or more of the following languages: Labview, Matlab, Python  
                  • Development of robust and reliable instrumentation |
| **Qualifications, certification and training (relevant to role)** | • PhD (or close to completion) or equivalent experience in Fibre Optic Sensing, Electrical & Electronics Engineering or related subject or significant relevant work experience  |
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

![Key stakeholder relationships diagram]

- **Line manager**
- **Role holder**
- **Associate Professor**
- **Research Fellow**
- **Colleagues**
- **Students**