



Job title	Research Associate/Fellow in optical sensing in healthcare (Title will be 'Research Associate' where an appointment is made before PhD is completed)	Job family and level	Research and Teaching Level 4 (Appointment will be Level 4 Career Training Grade where an appointment is made before PhD has been completed)
School/ Department	Engineering	Location	Faculty of Engineering, University of Nottingham

Purpose of role

The purpose of this role will be to support the principal investigator or research team in developing research objectives and proposals and conducting research in the area of optical biosensing in healthcare applications. The role will be expected to develop an optical fibre sensors system for monitoring key biomarkers in urine, including instrumentation construction and testing, regulatory approval and support in pre-clinical studies and will be responsible for writing up their work in order to contribute to published outcomes.

The role holder will have the opportunity to use their initiative and creativity to identify areas for research, develop research methods and extend their research portfolio.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	To plan and conduct research using recognised approaches, methodologies and techniques within the research area and support the development of research objectives and proposals for own and/or collaborative research area.	60%
2	Support the process of preparing commercialisation and regulatory approval.	15%
3	To analyse and illuminate data, interpret reports, evaluate and criticise texts and bring new insights to research area.	10%
4	Present the results of research at project progress meetings and at conferences.	5%
5	To contribute to writing up research findings for publication.	5%
6	Engagement of stakeholders and end users	5%

Person specification

	Essential	Desirable
Skills	<ul style="list-style-type: none"> ▪ Oral and written communication skills, including the ability to communicate with clarity on complex information. ▪ Establishes credibility and works cooperatively with others ▪ Organised and methodical with ability to manage own time and workload effectively ▪ Monitors the progress of work against project milestones/deliverables and/or agreed standards of work ▪ Able to analyse data and carefully present data for presentation ▪ Developing research skills, with the ability to creatively apply relevant research approaches, models, techniques and methods ▪ Ability to contribute to method improvement. ▪ Analytical ability to facilitate conceptual thinking, innovation and creativity. ▪ Ability to build relationships and collaborate with others, internally and externally. 	<ul style="list-style-type: none"> ▪ Ability to assess and organise resource requirements and deploy effectively. ▪ Ability to foster a research culture and commitment to learn in others. ▪ Ability to analyse and illuminate data, interprets reports, evaluate and criticise texts and bring new insights. ▪ Adapts communication to suit the audience.
Knowledge and experience	<ul style="list-style-type: none"> ▪ Evidence of sufficient breadth or depth of research methodologies and techniques to work in research area. ▪ Knowledge and experience of constructing sensor-based medical devices ▪ Data capture, recording of data and report writing to a professional standard ▪ Experience of signal processing and data analysis ▪ Evidence of using research methodologies and techniques to work within research area ▪ Experience of fabricating and constructing chemical or biochemical sensor 	<ul style="list-style-type: none"> ▪ Experience in medical device studies and the regulatory process ▪ Electronic design ▪ Writing firmware ▪ Matlab ▪ Experience with using optical fibre biosensors
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> • PhD (or close to completion), or equivalent experience in Fibre Optic Sensing, Biomedical Engineering Electrical & Electronics Engineering or related 	

	subject or significant relevant work experience.	
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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 friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
- Taking ownership** Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
- Forward thinking** Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
- Professional pride** Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
- Always inclusive** Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others



