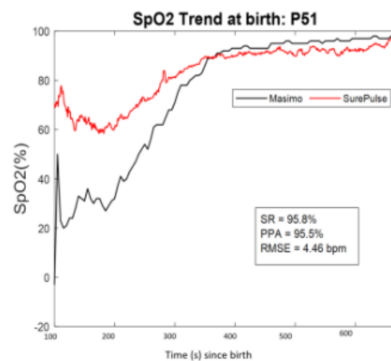
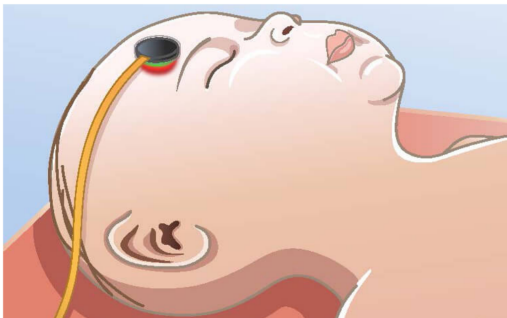




Optics and Photonics Group Lunchtime Seminar “Monitoring of SpO₂ in newborns”

Simon Stockwell
Fibre Optic Sensors Group



13:30 Wednesday 5 October 2022
B3 - Life Sciences building
All Welcome

[http:](http://optics.eee.nottingham.ac.uk/wiki/Seminars_2022-2023)

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Add to Calendar



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MS Teams link

The moments after birth are crucial in determining the health of a newborn. Attending clinical teams need to ascertain whether the newborn requires any medical intervention in a short space of time. Given that around 10% of births each year require some form of intervention (around 60,000/year in the UK alone) the need to accurately diagnose problems is important. Whilst ECG is sometimes used after birth to measure heart rate, issues with attachment to the skin mean the most common method of measuring any vital signs is with a stethoscope. This does not allow for monitoring of blood oxygen levels (SpO₂) however which are the best indicator of health for a newborn.

We are currently developing a photoplethysmogram sensor to measure both heart rate and SpO₂ in the minutes and days after birth and have tested this in a variety of settings, including in the labour suite and neonatal intensive care units. We are looking further to develop new techniques to improve the accuracy of these measurements in this critical phase of life.