Autumn 2023

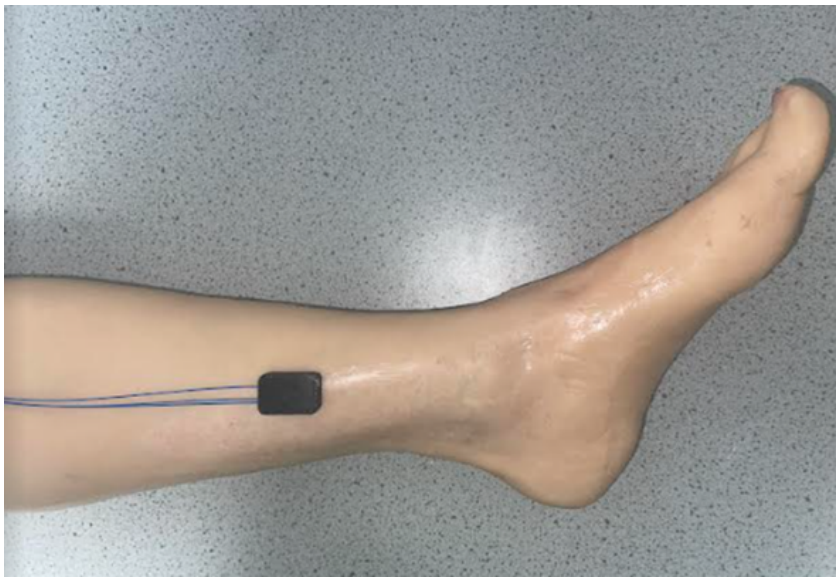
Optics & Photonics Group Lunchtime Seminar Series

University of Nottingham

Development of Fibre Optic Sensor for Photoplethysmography Measurements Under Compression Bandage

Basem Basunaid

UoN Fibre Sensors Group



13:30 Wednesday 18 October 2023

Coates Building - C24

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Development of Fibre Optic Sensor for Photoplethysmography Measurements Under Compression Bandage

The photoplethysmography (PPG) was first introduced in 1936 as a method to quantify changes in blood volume resulting from the administration of medications. Then, the pulse oximeter was invented in 1973 to monitor the arterial oxygenated blood in the operation room. The use of photoplethysmography sensors has seen a notable surge in recent years due to their usefulness, low cost, and portability.

Chronic Venous Insufficiency (CVI) imposes a considerable burden on public health, particularly affecting the elderly population. The use of a compression bandage is considered as one of the treatments aimed to improve blood circulation inside the venous leg. In this seminar, the design of fibre optic sensor for Photoplethysmography measurements will be discussed to assess the physiological impact of compression bandages.

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All are welcome

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