



UNIVERSITY OF LEICESTER

Submission

A team of researchers at the University of Leicester used a combination of disciplines and sophisticated mathematical modelling to create a device that could revolutionise the way we measure and monitor blood pressure for the first time in more than a century.

Led by Bryan Williams, professor of medicine at the institution, scientists developed a sensor that can be worn as a wristwatch but at the same time uses complex formulae to accurately measure blood pressure in the vessels close to the heart.

In doing so, it is a step on from the conventional method of measuring blood pressure, which, by using a cuff inflated around the upper arm, is able to obtain a reading for vessels only in that part of the body.

Instead, the new sensor filters out the “amplification” effect that means blood in the arm tends to be at a higher pressure than vessels closer to the heart, such as the aorta.

Leicester’s researchers collaborated with a private company on the project, as well as receiving funding from the NHS, and now have high hope for the commercial success of the venture.

Judge Chris Cobb, chief operation officer and university secretary, University of London, said Professor Williams and his team “have transformed the measurement and monitoring of blood pressure”.

“By using a combination of disciplines and sophisticated mathematical modelling, the team have developed a sensor that can be worn as a wristwatch to monitor blood pressure over prolonged periods and under different environmental conditions,” he said.

“The device will have significant and immediate health benefits and the potential for considerable commercial success.”