

# Body Sensor Networks Monitor Physical Data Wirelessly In Real Time

Imperial College London



Professor Guang-Zhong Yang and his team at the Department of Computing, Imperial College London have developed Body Sensor Networks (BSNs) that effectively monitor readouts of heart-rate, blood oxygen levels, temperature and physical activity with relative ease.

“ *The miniature wearable microsensors and wireless communication technology can be used wherever real-time monitoring is required — from managing patients’ chronic diseases in medical facilities to monitoring the health of people living on their own.*

The e-AR (ear-worn activity recognition) sensor developed by the team has been tested with patients recovering from surgery at St. Mary’s Hospital in London.

Beyond medical applications, a team from Imperial College’s Tanaka Business School demonstrated BSNs also could be used for personal fitness monitoring. So the Royal College of Art was tasked with designing a wearable sensor directed

at the elite athlete and fitness sector. The end result: a device that can monitor an athlete's performance and transmit the information to his or her mobile phone, personal digital assistant device or computer.

Professor Yang and his team are now working with the Engineering and Physical Sciences Research Council, which is the United Kingdom's governmental agency for funding university research grants for engineering and physical sciences projects, and UK Sport, the leading government agency promoting sports in the United Kingdom, in piloting the e-AR sensor for training potential UK medallists. Imperial Innovations, a technology commercialization and investment company based at Imperial College London, has formed the company Sensixa to commercialize the many applications of BSNs. Various government grants were used to fund the initial research underlying the patented BSN technology.

Additional information is available at [www.sensixa.com/](http://www.sensixa.com/).

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