Fiber Optic Sensors for Posture Monitoring

With the increasing demand for compactness, comfort, accuracy, and other features in new medical monitoring devices, the development of wearable optical fiber sensors is increasingly ...

Background: In the last ten years, the design and implementation of Optical Fiber Sensors (OFS) in biomedical applications have been discussed, with a focus on different subareas, such as...

In , this work describes the evaluation of a wearable plastic optical fiber (POF) sensor for monitoring seated spinal posture, in contrast to a conventional expert visual analysis, and the ...

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Real-Time Human Posture Recognition Using Embedded Optical Fiber Sensors and Machine Learning Publisher: IEEE PDF

Hence, a wearable, embedded asymmetric color-blocked optical fiber sensor based on a hydrogel has been developed. Its sensing principle is grounded in the total internal reflection within ...

In this paper, we presents a microsphere-based fiber-optic sensor array designed for sitting posture monitoring. The sensor features a hollow-core fiber with silica walls forming an air cavity, enabling ...

The development of a noninvasive optical fiber sensor (OFS) architecture adaptable to a shoe sole for plantar pressure remote monitoring, suitable to be integrated in an IoT e-Health ...

In this sense, this work proposes to remodel a typical optical fiber FMG sensor with smaller portable components. Moreover, all data acquisition and processing routines were migrated to a Raspberry Pi ...

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