



River Publishers Series in Electronic Materials, Circuits and Devices

## **Circuits and Systems for Wearable Technologies**

**IEEE UKCAS 2019**

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### **Description:**

This book is based on presentations given at the 2nd IEEE United Kingdom Circuits and Systems (UKCAS 2019) Workshop. It covers several advanced topics in the areas of semiconductor devices, circuits and systems, and energy harvesting; discussing their application in emerging implantable and wearable technologies and IoT. Notable application examples discussed include rapid infectious disease monitoring, in-situ tear fluid analysis, sleep engineering, chronic pain treatment, personalised anti-cancer therapy, foetus and neonate monitoring, monitoring of bone healing, orthopedic implants, magnetomyography and intelligent gesture recognition. Fundamental aspects of these topics are discussed, and state-of-the-art developments are presented.

**Keywords:** Low-power biomedical circuits, circuit topologies, wearable medical devices, implantable sensors, lab-on-chip, ISFET, magnetomyography, nanowire sensors, real-time data analysis, kinetic energy harvesting, IoT

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