River Publishers

Electronic Skin: Sensors and Systems

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Considerable amount of effort has been devoted, over the recent years, towards the development of electronic skin (e-skin) for many application domains such as prosthetics, robotics, and industrial automation.

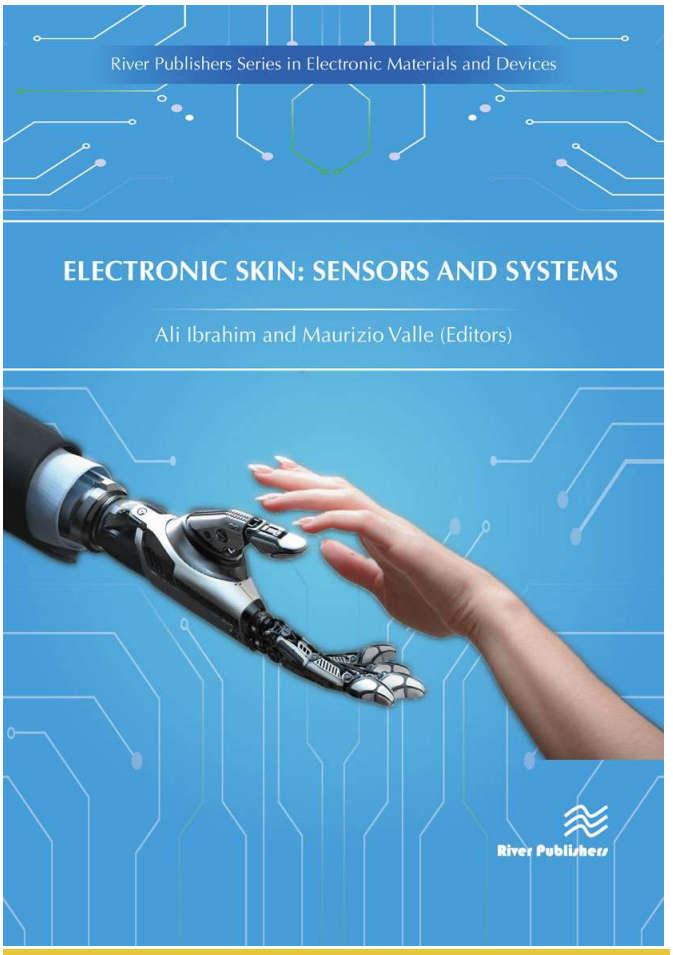
Electronic Skin: Sensors and Systems focuses on the main components constituting the e-skin system. The e-skin system is based on: i) sensing materials composing the tactile sensor array, ii) the front end electronics for data acquisition and signal conditioning, iii) the embedded processing unit performing tactile data decoding, and iv) the communication interface in charge of transmitting the sensors data for further computing.

Technical topics discussed in the book include:

- Tactile sensing material;
- Electronic Skin systems;
- Embedded computing and tactile data decoding;
- Communication systems for tactile data transmission;
- Relevant applications of e-skin system;

The book takes into account not only sensing materials but it also provides a thorough assessment of the current state of the art at system level. The book addresses embedded electronics and tactile data processing and decoding, techniques for low power embedded computing, and the communication interface.

Electronic Skin: Sensors and Systems is ideal for researchers, Ph.D. students, academic staff and Masters/research students in sensors/sensing systems, embedded systems, data processing and decoding, and communication systems.



River Publishers Series in Electronic Materials, Circuits and Devices

ISBN: 9788770222167
e-ISBN: 9788770222150
Available From: December 2020
Price: € 95.00

KEYWORDS:
Electronic skin system, tactile sensors, embedded data processing, efficient algorithms for smart tactile sensors, optical communication links, electronic skin system applications

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