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Collana	Lecture Notes in Electrical Engineering, , 1876-1100 ; ; 351
Disciplina	620
Soggetti	Electronics Microelectronics Robotics Automation Biomedical engineering Energy harvesting Electronics and Microelectronics, Instrumentation Robotics and Automation Biomedical Engineering and Bioengineering Energy Harvesting
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Developments and Applications of Electronic Nose Systems for Gas Mixtures Classification and Concentration Estimation -- Machine learning-based system for detecting unseen malicious software -- Implementation of a spread-spectrum-based smart lighting system on an embedded platform -- Self-powered active cooling system for high performance processors -- High Speed VLSI architecture for finding the first W maximum/minimum values -- Design and implementation of a portable fNIRS embedded system -- Advancements on Silicon Ultrasound Probes (CMUT) for Medical Imaging Applications -- Open platforms for the advancement of ultrasound research -- A robust tracking algorithm for super-resolution reconstruction of vehicle license plates -- c-Walker: a Cyber-Physical System for Ambient Assisted Living -- 2D and 3D Palmprint extraction by an Automated

Ultrasound System -- AA-Battery Sized Energy Harvesting Power Management Module for Indoor Light Wireless Sensor Applications -- A Framework for Network-On-Chip comparison based on OpenSPARC T2 processor -- A GPU 3D segmentation framework for medical imaging -- Augmented Reality tools for Structural Health Monitoring applications -- Squeeze the lemon: balancing as a way to use every drop of energy in a Lithium-ion battery -- Fully Integrated 60 GHz Transciever for Wireless HD/WiGig Short-range Multi-Gbit Connections -- Low cost FMCW radar design and implementation for harbour surveillance applications -- Healthcare System for Non-invasive Fall Detection in Indoor Environment -- Analysis of Spread-Spectrum Clocking Modulations Under Synchronization Timing Constraint -- Towards a Frequency Domain Processor for Real-Time SIFT-based Filtering -- A real-time FPGA-based solution for binary image thinning -- Low cost electrical current sensors with extremely wide measurement range -- Pathological Voice Analysis via Digital Signal Processing -- A Platform-based Emulator for Mass-storage Flash Cards Evaluation in Embedded Systems -- A Model-Based Methodology to Generate Code for Timer Units.

Sommario/riassunto

This book provides a thorough overview of cutting-edge research on electronics applications relevant to industry, the environment, and society at large. A wide spectrum of application domains are covered, from automotive to space and from health to security, and special attention is devoted to the use of embedded devices and sensors for imaging, communication, and control. The book is based on the 2014 APPLEPIES Conference, held in Rome, which brought together researchers and stakeholders to consider the most significant current trends in the field of applied electronics and to debate visions for the future. Areas covered by the conference included information communication technology; biotechnology and biomedical imaging; space; secure, clean, and efficient energy; the environment; and smart, green, and integrated transport. As electronics technology continues to develop apace, constantly meeting previously unthinkable targets, further attention needs to be directed toward the electronics applications and the development of systems that facilitate human activities. This book, written by industrial and academic professionals, will hopefully contribute in this endeavor.