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Nota di contenuto	A Portable Continuous Wave Radar System to Detect Elderly Fall -- A Piezoelectric Heart Sound Sensor for Wearable Healthcare Monitoring Devices -- Vertical Hand Position Estimation with Differential Barometery Supported by RFID Synchronization Systems and Medical Applications -- The Smart Insole: A Pilot Study of Fall Detection -- Arrhythmia detection with Antidictionary Coding and its application on mobile platforms -- Characterisation of breathing and physical activity patterns in the general population using the wearable Respeck monitor -- Medical tele-monitoring and tele-assistance for diabetics patients by means of 5G cellular networks Physical Activity Monitoring -- Group Walking Recognition based on Smartphone Sensors -- Towards Body

Sensor Network Based Gait Abnormality Evaluation for Stroke Survivors -- Motion Recognition for Smart Sports Based on Wearable -- Pulse Wave Characteristics based on Age and Body Mass Index (BMI) During Sitting Posture In-Body Communications -- A novel galvanic coupling testbed based on PC sound card for intra-body communication links -- Sensitivity of Galvanic Intra-Body Communication Channel to System Parameters -- Magnetic Steering of Superparamagnetic Nanoparticles in Duct Flow for Molecular Communication: A Feasibility Study -- Fat in the Abdomen Area as a Propagation Medium in WBAN Applications -- On-Body Communications -- Optical Wireless Data Transfer Through Biotissues: Practical Evidence and Initial Results -- Estimation of Skin Conductance Response through Adaptive filtering -- Capacitive Body-Coupled Communication in the 400 – 500 MHz Frequency Band -- Security, Privacy and Performance Evaluation -- SmartBAN Performance Evaluation for Diverse Applications -- Cybersecurity Assessment of the Polar Bluetooth Low Energy Heart-rate Sensor -- User's Authentication using Information Collected by Smart-shoes -- ICT Solutions for Diagnosis and Social Inclusion -- Social Inclusion for Children with Disabilities: The Role -- Digital resources aiding opportunities for affiliation and practical reasoning among people with dementia: A scoping review -- The Relationship Between Diagnosed Burnout and Sleep -- Measured by Activity Trackers: Four Longitudinal Case Studies -- Using Distributed Wearable Inertial Sensors to Measure and Evaluate the Motions of Children with Cerebral Palsy in Hippotherapy Propagation -- Channel Gain for a Wrist-to-Arm Scenario in the 55-65 GHz Frequency Band -- WBAN Radio Channel Characteristics between the Endoscope Capsule and On-body Antenna -- Analysis of Channel Characteristic for Body Channel Communication Transceiver Design -- MAC protocol with interference mitigation using negotiation among coordinators in multiple wireless body area networks -- Pseudo-Dynamic UWB WBAN Off-Body Radio Channel Measurements – Preliminary Results.

Sommario/riassunto

This book constitutes the refereed post-conference proceedings of the 14th EAI International Conference on Body Area Networks, BodyNets 2019, held in Florence, Italy, in October 2019. The 27 papers presented were selected from 54 submissions and issue new technologies to provide trustable measuring and communications mechanisms from the data source to medical health databases. Wireless body area networks (WBAN) are one major element in this process. Not only on-body devices but also technologies providing information from inside a body are in the focus of this conference. Dependable communications combined with accurate localization and behavior analysis will benefit WBAN technology and make the healthcare processes more effective.