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Descrizione fisica	1 online resource (210 pages)
Collana	Lecture Notes in Bioengineering, , 2195-2728
Disciplina	610.285
Soggetti	Biomedical engineering Medical informatics Biology - Technique Biophysics Clinical medicine - Research Medical and Health Technologies Health Informatics Biomedical Devices and Instrumentation Biophysical Methods Clinical Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Medicine Based Engineering and Informatics to Foster Patient Physician Relationship -- Statistical Gait Analysis based on surface electromyography -- Brain-computer interfaces with functional electrical stimulation for motor neurorehabilitation: from research to clinical practice -- Biopotential acquisition systems -- Wearable Bioimpedance Measuring Devices -- Predictive cardiovascular engineering: transforming data into future insights on cardiovascular disease -- Engineering special medical devices for vulnerable groups -- Serious games and virtual reality for rehabilitation and follow up of wheelchaired persons -- Society 5.0 and a Human Centred Health Care.
Sommario/riassunto	This book originates from the idea to adapt biomedical engineering and medical informatics to current clinical needs and proposes a paradigm shift in medical engineering, where the limitations of technology should

no longer be the starting point of design, but rather the development of biomedical devices, software, and systems should stem from clinical needs and wishes. Gathering chapters written by authoritative researchers, working the interface between medicine and engineering, this book presents successful attempts of conceiving technology based on clinical practice. It reports on new strategies for medical diagnosis, rehabilitation, and eHealth, focusing on solutions to foster better quality of life through technology, with an emphasis on patients' and clinical needs, and vulnerable populations. All in all, the book offers a reference guide and a source of inspiration for biomedical engineers, clinical scientists, physicians, and computer scientists. Yet, it alsoincludes practical information for personnel using biomedical equipment, as well as timely insights that are expected to help health agencies and software firms in their decision-making processes.