1. **Record Nr.**   UNINA9910557900003321

   Autore   Di Nardo Francesco

   Titolo   Recent Advances in Motion Analysis

   Pubbl/distr/stampa   Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021

   Descrizione fisica   1 online resource (192 p.)

   Soggetti   Technology: general issues

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Sommario/riassunto   The advances in the technology and methodology for human movement capture and analysis over the last decade have been remarkable. Besides acknowledged approaches for kinematic, dynamic, and electromyographic (EMG) analysis carried out in the laboratory, more recently developed devices, such as wearables, inertial measurement units, ambient sensors, and cameras or depth sensors, have been adopted on a wide scale. Furthermore, computational intelligence (CI) methods, such as artificial neural networks, have recently emerged as promising tools for the development and application of intelligent systems in motion analysis. Thus, the synergy of classic instrumentation and novel smart devices and techniques has created unique capabilities in the continuous monitoring of motor behaviors in different fields, such as clinics, sports, and ergonomics. However, real-time sensing, signal processing, human activity recognition, and characterization and interpretation of motion metrics and behaviors from sensor data still representing a challenging problem not only in laboratories but also at home and in the community. This book addresses open research issues related to the improvement of classic approaches and the development of novel technologies and techniques in the domain of motion analysis in all the various fields of application.