1. **Record Nr.**   UNISALENTO991004371038107536

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   Titolo   Advanced Robotics for Medical Rehabilitation : Current State of the Art
                        and Recent Advances / by Shane Xie

   ISBN   9783319344195

   Collana   Springer Tracts in Advanced Robotics ; 108

   Disciplina   610.28

   Soggetti   Biomedical Engineering
                        Robotics and Automation
                        Rehabilitation

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Sommario/riassunto   Focussing on the key technologies in developing robots for a wide
                            range of medical rehabilitation activities â which will include
                            robotics basics, modelling and control, biomechanics modelling,
                            rehabilitation strategies, robot assistance, clinical
                            setup/implementation as well as neural and muscular interfaces for
                            rehabilitation robot control â this book is split into two parts; a
                            review of the current state of the art, and recent advances in robotics
                            for medical rehabilitation. Both parts will include five sections for the
                            five key areas in rehabilitation robotics: (i) the upper limb; (ii) lower
                            limb for gait rehabilitation (iii) hand, finger and wrist; (iv) ankle for
                            strains and sprains; and (v) the use of EEG and EMG to create interfaces
                            between the neurological and muscular functions of the patients and
                            the rehabilitation robots. Each chapter provides a description of the
                            design of the device, the control system used, and the implementation
                            and testing to show how it fulfils the needs of that specific area of
                            rehabilitation.The book will detail new devices, some of which have
                            never been published before in any journal or conference.