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Titolo	Advanced Technologies for the Rehabilitation of Gait and Balance Disorders / / edited by Giorgio Sandrini, Volker Homberg, Leopold Saltuari, Nicola Smania, Alessandra Pedrocchi
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Descrizione fisica	1 online resource (IX, 536 p. 68 illus., 42 illus. in color.)
Collana	Biosystems & Biorobotics, , 2195-3562 ; ; 19
Disciplina	617.03
Soggetti	Biomedical engineering Medical rehabilitation User interfaces (Computer systems) Physiotherapy Robotics Automation Biomedical Engineering and Bioengineering Rehabilitation Medicine User Interfaces and Human Computer Interaction Robotics and Automation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	PART I Assessment of Gait and Balance Disorders -- PART II Integrated Approach to Gait And Balance Rehabilitation In Neurological Diseases -- PART III New Technologies for the Evaluation and Rehabilitation of Gait and Balance Disorders -- PART IV Spasticity and Gait Rehabilitation.
Sommario/riassunto	The book provides readers with a comprehensive overview of the state of the art in the field of gait and balance rehabilitation. It describes technologies and devices together with the requirements and factors to be considered during their application in clinical settings. The book covers physiological and pathophysiological basis of locomotion and posture control, describes integrated approaches for the treatment of neurological diseases and spinal cord injury, as well as important

principles for designing appropriate clinical studies. It presents computer and robotic technologies currently used in rehabilitation, such as exoskeleton devices, functional electrical stimulation, virtual reality and many more, highlighting the main advantages and challenges both from the clinical and engineering perspective. Written in an easy-to-understand style, the book is intended for people with different background and expertise, including medical and engineering students, clinicians and physiotherapists, as well as technical developers of rehabilitation systems and their corresponding human-compute interfaces. It aims at fostering an increased awareness of available technologies for balance and gait rehabilitation, as well as a better communication and collaboration between their users and developers.